AMERICAN GAS ASSOCIATION MONTHLY

MAY · 1934

Manufactured Gas Code Submitted

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Gas Prepared To Serve 15,000,000 Customers ALEXANDER FORWARD

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Planning for House Heating Sales HENRY O. LOEBELL

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Production Conference Opens May 21

1933 PROCEEDINGS

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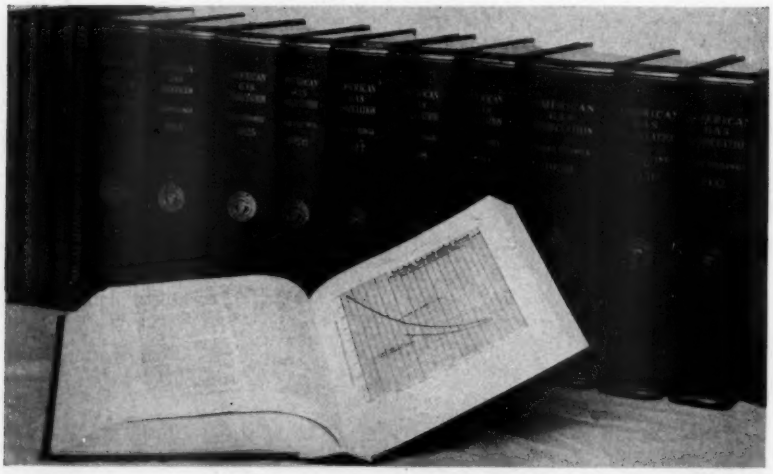

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AMERICAN GAS ASSOCIATION MONTHLY

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THE ideal public utility is not difficult to define. It is an organization of men and equipment established and maintained to render first-class service to its customers at reasonable rates based on sound financing of the enterprise, a cultural wage to its employes, and a fair return upon a just capitalization. Such a company has an alert management keen to bring the latest means of utilizing its service to the communities it reaches, eager to lower its unit prices as profitable business increases and to share with its customers prosperity to which they have contributed. Under the stress of current tax burdens it redoubles its efforts to sell its product, knowing that the best and apparently the only road to prosperity is that of expanding business. It is determined to safeguard so far as possible a fair return to those whose savings have been intrusted to its development, but it is thinking less about constitutional rights than of economical administration, friendly relations with its customers, good treatment of its employes and rendering the full measure of devoted service to those whose patronage enables it to live.

—CHRISTIAN SCIENCE MONITOR.

AMERICAN GAS
ASSOCIATION
MONTHLY

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Allyn B. Tunis, Editor

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Manufactured Gas Industry Presents Proposed Code

PUBLIC hearing on the proposed code of the manufactured gas industry was held at the Washington Hotel, Washington, D. C., April 11, with Leighton H. Peebles, deputy administrator, presiding.

Presentation of the code by representatives of the industry was made at the morning session by a subcommittee of the Code Committee consisting of Judge H. O. Caster, chairman; N. Henry Gellert and R. C. Hoffman, vice-chairmen; Randall J. Le Boeuf, Jr., counsel, Colonel Oscar H. Fogg and Herman Russell.

At the afternoon session objections to certain hour and wage provisions of the code were made by representatives of several labor organizations and by the bituminous coal industry. Deputy Administrator Peebles asked that briefs be filed and recessed the hearing until May 11.

Some of the principal points covered by members of the committee presenting the code were:

Judge Caster: The manufactured gas industry is 98.77 per cent engaged in intrastate commerce, and the industry's rates to 95 per cent of its customers are regulated under state laws. Approximately 80 per cent of the industry's revenues are derived from gas sales to domestic customers, mainly for cooking and water heating. Most of the other 20 per cent are derived from industrial and commercial sales.

At the end of 1932 the industry employed 67,300 people. Of these, 57,100 were employees of members of the Manufactured Gas Industry Association—sponsor of the code—1,200 were employed by gas systems operated by municipalities, and the remaining 9,000 were employed by privately operated plants not members of the Industry Association. On December 31, 1932, there were still employed by the industry 88 per cent of the number of persons who were at work in December, 1929. By December, 1933, reemployment had brought the percentage up to 95 per cent.

The industry's cost of operation is rising because of the increasing cost of materials and supplies, especially the cost of coal and oil. Unlike unregulated bodies, the industry has no way of passing along these added costs except through rate increases, fixed by regulatory bodies. These rate increases are difficult to obtain and always involve long drawn out proceedings. The industry is in direct competition with all other fuels.

Because of the difference in the nature of the business and the problems confronting each of them, separate codes have been filed by the manufactured gas industry and the natural gas industry.

Colonel Fogg: The retail sale of safe, durable and efficient gas appliances is an essential and inseparable part of the gas industry's operations, and is necessary to furnish the maximum of service to the public. The industry as a whole believes that neither the gas utility nor the local retail dealer should seek to dominate the gas appliance merchandising field. While the industry claims the right, in the proposed code, to use every reasonable activity to promote its business and service to the public, and to this end to sell gas appliances, the code by special provision invites the profitable participation of retail dealers as an aid in developing the sale of gas.

One of the most important features of the proposed code is the provision made for an organization jointly representative of the retail dealers and the manufactured gas industry. The purpose of this organization is to adjudicate such complaints as may arise respecting the sale of gas appliances, thereby affording all interested parties the opportunity, whenever advisable, to modify or amend the trade practices now proposed.

With the exception of the gas range and certain simpler types of water heaters and room heaters, a general acceptance of other gas services has not been gained throughout

the country. Even in the case of gas ranges, a considerable degree of promotional work on the part of gas companies is necessary at all times in order to gain acceptance of the newer types of ranges and other appliances that are being continually developed.

The early acceptance and purchase of these improved appliances by customers represents the life blood of the industry's existence and the keystone of its future development. The responsibility for winning the public acceptance of these developments must remain with the industry itself. Every obsolete or poor gas appliance on the line is an open door to other competitive fuels. Gas cannot be delivered to the customer's back door for simple consumption like meat, groceries, or other similar commodities. The value of gas service to the customer is entirely limited by the ability of the appliance to render a satisfactory degree of service, comfort, and convenience to the person consuming gas as a fuel. Customer satisfaction cannot be assured and the industry's objective of increasing gas sales in the future, or even protecting its present sales, cannot be achieved except by assuring modern, safe, and efficient gas appliances on its lines.

It is a matter of record that the gas industry has taken very seriously its responsibility for making available to the public gas appliances which are safe, durable, and efficient. For decades many companies have maintained their own appliance testing laboratories whose requirements and tests have guided the appliance manufacturers' efforts to improve their equipment. It is obvious that having tested the various appliances and determined upon the most satisfactory varieties, the simplest and most effective way of making these standards applicable in the territory is for the company to offer such appliances for sale, thus setting the standard for that locality.

Within the last ten years the industry has established an elaborate testing program with laboratories in Cleveland, Ohio, and Los Angeles, California, where the American Gas Association Appliance Testing Laboratories conduct rigorous tests for safety and for durability and efficiency of gas appliances of virtually all types.

Sales Confined to Approved Appliances

Since this Laboratory was established, practically all gas companies have confined their sales of appliances to those which have met the requirements set up by that organization. This leadership of the industry has elevated the standard of appliances offered to the public by all types of dealers to the extent that today 90 per cent of all the gas appliances sold meet the requirements of this Laboratory for durability, efficiency, and safety.

Gas is one of the safest fuels when used in appliances which are properly constructed, correctly installed, and carefully maintained. Safe and satisfactory service to the customer cannot be assured unless these requirements are fully met. It is not so important to the dealer as to the utility whether the appliance is designed to give safe and satisfactory service to the customer over a long period of years. The special requirements necessary for the proper installation of gas appliances are more readily fulfilled by the gas company than by other dealers whose products in general require no complicated installation technique. Unless the gas appliance functions satisfactorily at all times, the owner will become dissatisfied with the service and not with the appliance itself. Since the gas company is usually called upon to service all customers' equipment, its interest in promoting the sale of satisfactory appliances is far greater than that of any dealer.

Since its organization in 1919, the American Gas Association has exercised leadership in bringing both gas companies and dealers to a better understanding of the part which each should play in offering for sale adequate, efficient and safe gas appliances to the public. From time to time statements of principles for developing cooperative sales activities between dealers and gas companies have been prepared by the Association. The first of these was officially approved by the Heating and Piping Contractors National Association in 1927. A similar statement, adopted by the American Gas Association on May 2, 1931, was presented to the National Retail Hardware Association and to the National Association of Master Plumbers at the 1931 Conventions of these organizations.

A resolution was adopted by the National Retail Hardware Association on June 23, 1931, accepting these principles, and the National Association of Master Plumbers gave its unqualified approval to these principles on June 25, 1931.

Most Sales Depend on Local Gas Companies

The gas industry has no equipment manufacturers with large resources, such as those which exist in the electric industry. In their absence, the gas industry must depend to a much greater degree upon the sales and promotional efforts of the local gas companies.

More than three years ago the gas industry set up standards of fair competition and trade practices, and these, as noted above, have been declared of mutual benefit by at least two other trade bodies. Hence, it is logical that the manufactured gas industry should include in its proposed code those standards appropriate for enforcement on a nation-wide scale. To this end provisions are made in the code to assure the availability of safe, durable and efficient gas appliances; it is provided that the gas companies shall not merchandise equipment which is not related to the use of gas, and the industry further agrees that its deferred payment terms shall enable dealers in the market to participate on the same basis.

Randall J. LeBoeuf, Jr.: The manufactured gas company is almost always a local service enterprise, its product being consumed within a relatively small congested area. This is true in greater degree of the manufactured gas business than any of the other public utility industries.

A code is intended to afford an escape from unfair trade practices and competition of a destructive character. If the benefits so realized do not offset the added costs resulting from the maximum hour and minimum wage provisions, it is generally possible to promptly increase the price of that industry's product to prevent unreasonable loss. This is not true in the case of the manufactured gas industry, which is not a free agent. If its operating expenses are increased, it customarily must secure the approval of utility commissions to any rate increases. These proceedings are long

drawn out, and the relief sought is frequently impossible to obtain. It is almost a rule, that before rates can be raised the increase in expense must be demonstrated over a substantial period of time.

No Desire To Lower Wages

While the manufactured gas industry is non-competitive within itself, its product is in active competition with the fuels of other industries. Consequently, it is not sufficient to say that the industry has a legal right to demand that regulatory commissions grant rate increases to offset enhanced expenses. The above conditions must obviously control the form of any code under which the industry can survive and render to the public a service to which it is entitled.

Unless such protected and appropriate conditions are included in the code, the manufactured gas industry would find itself between the upper and nether millstones of enhanced labor and other costs resulting from the operation of the National Recovery Act, and of restrictive regulation of the industry's rates.

There is no desire to lower the high average wages and good working conditions that have long been prevalent in the industry, and the industry desires to cooperate in furthering the Recovery Program in so far as lies within its power. At the same time the provisions relating to minimum wages and maximum hours must be so adjusted, particularly in the case of the weaker marginal companies, that the industry may continue to carry on its functions.

Mr. Gellert: In arriving at provisions of the proposed code relative to wages and hours of labor the industry has given due consideration to the realities which are now facing it with rising costs of fuel and limitations as to price increase, due to the fact that the industry is entirely intrastate and regulated.

Notwithstanding this, the industry at the present time has an extremely high index of employment as compared with that of 1929. With the exception of certain construction employees, it has retained practically all of the employees working for it in the prosperity period. Its provisions for hours of labor and wages are based, first, on the conditions of saturation of employment now existing in the industry, and second, on the fact that it will be unable to raise prices in accord with increased costs of manufacturing fuels.

Employment Gains as Revenue Falls

As of December, 1933, the industry had a total of 72,300 men employed as against 67,300 in December of 1932. Of these, 68,800 were operating and office employees, an increase of 5,700 over December, 1932.

In spite of the fact that revenues from sales of gas fell from $444,115,000 in 1929 to $411,289,000 in 1932, and still lower in 1933 to approximately $379,303,100, employment in the operating end of the industry has been so well maintained that in December, 1933, there were actually 2200 more operating and office employees than were regularly connected with the industry in 1929. In other words, while revenues fell 14.6 per cent from 1929 to 1933, the number of operating and office employees increased 3.3 per cent.

Men employed on construction in the industry numbered 9,800 at the end of 1929, and 3,500 at the end of 1933. Construction expenditures for the industry fell from $112,851,900 in 1929 to $28,103,800 in 1933—a little less than 25 per cent of the amount expended in 1929. Public utility financing, a factor controlling new construction, showed even a greater drop. Total financing for new capital in 1929 for all utilities was close to two and one-half billion dollars. In 1933 it was ninety-three million dollars, or only 3.8 per cent of the 1929 figure.

With the demand for lower rates a constantly increasing threat to the industry; with an estimated net operating income in 1932 of $116,709,000—$13,891,000 less than in 1929; with estimated taxes mounting from $42,061,000 in 1929 to $45,355,000 in 1932, since when additional taxes have been imposed upon the industry; with the threat and, in some instances, the enactment of drastic legislation seriously impairing the ability of the industry to secure new capital through the sale of stocks or bonds; the problem of keeping at work the men now employed in the industry, much less of putting more men to work on construction, becomes a constantly more difficult one.

Industry a Leader in Holding Employees

Of those employed in December of 1929, the industry in December, 1933, had at work 103.3 per cent of its operating and office employees and 94.7 per cent of all its employees, including construction employees. Of all the industries covered by the data of the United States Bureau of Labor Statistics only one, the retail trade, with 105.4 per cent of its employees at work in December of 1933, surpassed this record.

In order to accomplish this result, the industry has reduced the hours of labor so that while only 8½ per cent of its employees were working 40 hours or less in December, 1929, by December of 1932, 11.7 per cent of its employees were working 40 hours or less. Due in part to the desire of the industry to maintain its ability to render satisfactory service, to keep its men employed, and in part to its response to the President's Re-employment Agreement, by October of 1933, 77.9 per cent of its employees were working 40 hours or less.

The industry has not only been a leader in holding its employees during the years of the depression, but it has also been a leader in the maintaining of wages. The average weekly pay in October of 1933, for all employees of the industry, was $29.35. These figures are based upon an analysis of payrolls reported by 212 companies which employ more than 53,000 persons. This is to be compared with the average weekly pay of $20.16 for all industries, as reported by the United States Bureau of Labor Statistics. For public utilities as a whole the average was $27.52, while for the retail trade the average was $19.42. Even in the Southern territory, the average wage of employees in the industry in October of 1933 was $24.23.

Some Exceptions to 40-Hour Week

This is an average wage of $5.28 less than that paid in the North and fully justifies the $5 differential previously set for those exempted in the class of executives, professionals and others.

The members of the industry in the Southern territory employ only 2,865 persons, or 4.3 per cent of all those

engaged in the industry. It is proposed that members of the industry located in the Southern territory be not required to pay the same minimum wages per week designated for members of the industry in other parts of the country. This differential has been set at $1.

The basic principle upon which the hours of labor in the code are established is that as far as possible employees shall not be permitted to work more than 40 hours a week. For the industry as a whole, however, certain exceptions are taken to this general rule.

Mr. Hoffman: In presenting the conditions faced by small gas companies, it should be remembered that these companies are somewhat different from those in other utility industries for the reason that they are not merely distributing companies, operating from transmission lines either interstate or intrastate, but are integral units manufacturing, distributing and selling their product the same as any other larger unit in the industry. These small companies are having a very difficult existence and are unable to earn any reasonable return on their investment. It is absolutely impossible for them to meet any provisions limiting the hours of employment. We therefore ask for exemption of companies having 2,000 meters or less. In this category are 199 private companies and 28 publicly owned companies.

Were these companies to comply with the provisions of the code, the return on their fixed capital would only be 2.3 per cent. Should the basic 40-hour week be required, these companies would earn as a whole class less than 1 per cent and most of them would go into bankruptcy. Therefore, by eliminating them from the code as to the hours and wages provision, we will serve the purposes of the N.R.A. far better by preserving them than by throwing them into bankruptcy, and thus increase the ranks of the unemployed as well as deprive the communities they serve of a much needed public service.

By-Products Important Factor

Mr. Russell: The industry itself consumes the major portion of the coke it produces, and the sale of coke and other by-products is not for profit, but is an element of credit against the other costs of producing gas, the final product.

The price at which gas can be sold is determined not only by the State regulatory bodies, but by the price of other competitive fuels used under similar conditions. Consequently, the net revenue derived from the disposal of by-products is such an important factor as a credit toward the cost of producing gas, that it is essential both to the consumer of gas as well as to the producer of gas that the by-products of this industry be included in the proposed code.

The manufacture of gas necessarily involves the production of by-products —such by-products being inherent in the manufacturing process without desire on the part of the industry outside of the economics involved.

In 1931 there were twenty-one by-product coke oven plants owned and operated by manufactured gas utilities. These produced 3,548,818 tons or 11 per cent of the country's by-product coke. About 65 per cent of this production was sold on the open market, amounting to 2,325,721 net tons. This represented 18 per cent of the total sales of by-product coke in this country during the year 1931.

In addition to the approximately three and one-half million tons of by-product coke mentioned above, gas companies in 1931 produced an additional 2,285,482 net tons of so-called gas house or retort coke.

Summarizing the above it appears that in 1931 gas companies produced a total of 5,834,300 net tons of coke, both by-product and gas-house or retort. In the same year, however, gas companies consumed a total of 3,520,000 net tons of coke, of which 1,943,000 tons were used as generator fuel in the manufacture of water gas; 596,000 tons were used as boiler fuel, while 981,000 tons were used in heating retorts. This coke consumed by the industry itself was equivalent to 60 per cent of the entire quantity of coke produced by the industry.

Production of by-products is not only an incident to the manufacture of gas, but the major portion of the coke produced by the industry is consumed in its own operations. There are many gas plants where the entire production of coke is consumed by the plants themselves, for the purposes previously mentioned. Coke operations are therefore included in the industry's proposed code.

In addition, many gas company employees work each day on operations in which part of their time is chargeable to gas manufacture and part to coke production. Such conditions would make for endless confusion if the coke operations of the industry were to be placed under some code other than its own.

Each additional bit of revenue that can be secured from the sale of coke, as well as other by-products, lowers correspondingly the cost of gas production. It is the gas company's objective, therefore, to secure the maximum return possible from the sale of by-products. This is indicated by the fact that in 1932, according to the United States Bureau of Mines, the revenue per ton of coke sold for domestic and industrial purposes by all producers in the United States amounted to $5.10; whereas the coke sold by the manufactured gas industry for domestic and industrial purposes yielded a revenue of $7 per ton, or $1.90 in excess of that realized by the industry in general.

Such data should serve to refute the charge sometimes made that gas companies dump their coke in the market for whatever it will bring, and are thus a source of unfair competition to other coke producers.

The solution of cases of unfair competition regarding the sale of coke or other by-products, if such arise, are specifically provided for in the proposed code.

Offers Aid To Solve Appliance Troubles

THE Appliance Servicing Committee, Commercial Section, is offering the benefit of its experience to A. G. A. member companies which have encountered unusual service troubles with automatic gas appliances. Members of the committee believe that they may render a real service in helping to solve some of the service difficulties which companies have experienced.

Member companies with problems of this type are invited to communicate with the Appliance Servicing Committee, Commercial Section, A. G. A. Headquarters, 420 Lexington Avenue, New York, N. Y.

Gas Prepared To Serve 15,000,000 Customers During Upturn*

By ALEXANDER FORWARD

Managing Director, American Gas Association

Alexander Forward

DESPITE the many measures that must still be taken to assure a reasonable degree of prosperity for all of us, there are undoubtedly some indications that general business is showing signs of improving. Factories are getting busier and more goods are being produced. The service industries are more active although heavy industry still moves very slowly. Railroads are hauling more freight and more passengers. Motion picture houses and theaters are playing to larger audiences and I predict that the golf clubs will perk up a bit this summer. The man in the street senses that things are somewhat better and his spirit reflects his hopes for better times. Some of the great corporations are increasing wages and showing better balance sheets. The captains of industry, as reflected in men like Alfred P. Sloan, Jr., Myron C. Taylor and others are telling their stockholders, and through them the public, that business has stopped coasting and has begun trudging up the hill.

Just like the depression affected business of every description, so will all sorts of business be in a position to secure some benefits when things move in the opposite direction. Our lives are too intertwined for it to be otherwise. That is why those in one line of business eagerly observe developments in other trades and base their conclusions to a large extent on what they see.

There are signs that the business pace within the gas industry has quickened. Not that any giddy tempo has been attained like that usually reported by automobile manufacturers following the first display of the new models. Public utilities cannot change pace quite so suddenly. Rather, ours is an instance of the plugging marathon runner instead of your own Mid-Western speed marvel, Glenn Cunningham. We lag both on the down and up grades.

Regaining Lost Customers

The gas industry represents approximately 1 per cent of the nation's annual business. But I believe that the influence of the gas industry on business as a whole is greater than that apparently small percentage would seem to indicate. That 1 per cent is probably the most stable increment of the nation's total business. It has varied throughout the economic cycles less than almost any other section of the entire manufacturing and selling structure. Because of small fluctuations it has always had a steadying effect on business equal to several times its dollar value. The importance of that one fact has been overlooked.

However, the number of customers served and gross revenues of the industry have declined during the depression. The peak in number of customers served by the entire industry, both manufactured and natural gas, was reached in May, 1931, when we had 16,015,000 customers. From this time a gradual decline set in until a low point was reached in July, 1933, when we served 15,056,000 customers, 959,000 or 6 per cent less than at the peak.

Since last July a gradual improvement has been shown so that by the end of January, 1934, we had regained 286,000 customers and were serving a total of 15,342,000. Up to August, 1930, the gross monthly revenues of the industry continued to exceed the corresponding months of the preceding year. In that month, for the first time during the depression, our gross revenue showed a decline and continued to fall until in April, 1933, when our revenues were 18 per cent below the same month of the preceding year. Since that time our revenues have gradually improved, but they have not yet reached the point where they equal revenues for the corresponding month of the previous year.

You can readily see from these figures that even though the gas industry is remarkably stable over a period of years it is susceptible to the influences of general conditions. It has had its downs but it is reasonable to conclude that its business will again have its ups.

But, even allowing for these ups and downs, the stability of the business should serve as an example for the aims toward which our economic system should strive. As a matter of fact, doesn't the stabilized condition of the gas business, with its avoidance of extreme peaks and valleys from year-to-year, its relatively steady employment of both labor and capital, and its freedom from intercompany competition, exemplify the very things that form the basis of the recovery program on which the country has embarked? If all industry had, through the decades, been gradually brought to such a sound basis of organization, isn't it fair to assume that, to a degree at least, the economic feasts and famines that all are now trying to find ways of avoiding could have been eluded? There is reason to believe that they could.

The industry has placed itself in a position to assist in the general business recovery. Plants and distribution systems have been well maintained and in many instances have been enlarged and strengthened. We stand ready to furnish a speedy, efficient and enlarged heating service. We stand ready to render that heating service as part of the manufacture and fabrication of the thousands of articles whose production will form the basis for a new pros-

*Address before the twenty-ninth annual convention of Mid-West Gas Association, Sioux City, Iowa, April 16, 1934.

perity. We stand ready to furnish on a higher scale than ever, the dozen or more heating services in the home that will help materially to raise the standards of living and health that can only come with a renewed industrial well-being.

Prosperity Ahead

Our fourteen and one-half million domestic meters will provide the means for the enjoyment of a fuller life for over half the population of the country and by that very act diffuse their new-found prosperity to others. Construction work in our industry will follow and the circle of prosperity will enlarge.

It is only through the sale of more gas that the industry can assist in further extending the general recovery. It is only through satisfaction with gas-burning equipment that our customers will use such equipment more and hence buy more gas. Are we, now that we are on the threshold of better business, offering the public appliances that cause a thrill and create a desire to possess? Let's make a quick survey and make a comparison with today's most aggressively merchandised article, —the automobile.

The 1934 range is as far advanced over the 1929 stove as the 1934 automobile is over its predecessor of five years ago. The gas range has been streamlined, it is decorated in colors, it gives more "meals" per gallon and it has all the gadgets like the motor car. (Yes, even including the radio!) And the 1934 gas ranges will last a lot longer than will the 1934 automobiles.

This year's gas water heaters are equally as far advanced over the 1929 modes as are comparative models of cars. In fact there has been as much daring design in the new gas water heaters as there has been in the new motor cars that appear to be going when they are coming and coming when they are going.

You will instantly agree with me when I say that the 1934 air-cooled gas refrigerators bear less resemblance to the 1929 variety than this year's Packards do to their older brothers.

Extreme Changes

You must also agree with me that the 1934 gas winter air-conditioning plants embody more real changes and improvements over 1929 house heating than have been embodied in automobile design during the same period.

At least the above appears to be the case to me as an interested observer. I am somewhat like Ed Wynn—I stick to my horse, never having owned an automobile. But I see plenty of examples on every street from which to draw conclusions.

So it is to a large extent with commercial and industrial appliances. This year's hotel ranges, ovens and miscellaneous stoves are far better than they were a few years ago. This is particularly true with respect to counter appliances. Gas toasters, small deep fat fryers, griddles, small broilers, automatic urn burners, automatic steam-table burners, and Silex coffee stoves are now available in forms that were entirely missing five years ago. Industrial gas apparatus has during the same period undergone changes that can be called nothing less than extreme. Controlled furnace atmospheres, immersion heating, diffusion and luminous combustion, many processes built around convected gas heat and new methods for automatic control have all helped to modernize industrial gas.

The manufacturer members of our industry have not been asleep. They have had the courage to change and improve, and in so doing, many of them have burned their bridges behind them. The old model appliances are a thing of the past.

Sales Must Keep Pace

The new domestic gas appliances have been designed within the limitations of the A. G. A. Approval Requirements as to safety, performance and construction. The various codes have become stricter-and-stricter from year-to-year but the new appliances have met them manfully. The Laboratory Seal of Approval is perhaps the only thing on gas appliances that appears the same in 1934 as it did in 1929. Ninety per cent of all domestic gas appliances sold in the United States and Canada now bear this seal.

It seems to me that all of the above points clearly to at least one thing. Sales must keep up with development. If improved and attractive ranges or modern water heaters, or any other appliances, are to mean anything; if they are going to lead to still better devices, they must be sold to the public so that use will be made of them and so that their worth will be appreciated.

The increment of new gas appliances connected to the lines each year has been too small. The number of consumers who judge the worth of gas service by appliances installed before 1929 is entirely too great. Isn't it true that on the whole competition has not a chance in the home or restaurant where really modern gas equipment is installed? While production costs are usually the final test of selecting factory fuels, modern industrial gas equipment goes a long way in securing and holding that class of wholesale business.

Gas rates have been adjusted so that they should prove increasingly attractive as business improves. Since 1929 there have been many rate adjustments. There have, during that same period, been instituted over 200 rates designed for house heating, making a total of more than 650 such rates in manufactured gas territory. It is not customary to make separate house heating rates in natural gas cities.

Industry Thoroughly Organized

Such business as the industry has lost during the depression can be partly accounted for by its marginal nature. People whose income status was altered had, in many instances, no alternative but to seek the cheapest means of providing the various heating services that they required. A large number of these customers will be gotten back again through normal effort. But others will require the best efforts of the industry to bring them into the fold again.

There is no denying the fact that many of the devices for burning cheaper fuels have been wonderfully improved. This means stiffer competition in our efforts to regain the marginal customers and secure new ones. But the new gas appliances should prove equal to the job.

Since house heating with gas was introduced generally throughout the country about twenty years ago, there have been developed only two new uses for gas in homes. These are refrigeration and summer air condition-

(Continued on page 179)

Sales Planning for Better Times*

By JAMES F. ORR

Commercial Manager, United Gas System

OUR success will depend upon our ability to find and to take advantage of our opportunity to increase our sales of gas. More business can be secured in 1934, but it will require new and better sales methods to obtain it. The administrative, scientific, resourceful thinker, who knows his product and his market, will reap the rewards. A tremendous market is waiting to be sold. So, in outlining a sales program for better times during 1934, we must first fully familiarize ourselves with the market which now exists and which is able to buy.

Figures given us by the American Gas Association tell us that the year 1934 will start with cook stoves in more than 5,000,000 kitchens that are obsolete to the point that they ordinarily should have been discarded some time past. If, then, you add to this the normal number of replacements for 1934 itself, we see that there is a potential market for over 7½ million ranges for 1934. This means that more than 25 per cent of the stoves in the United States ought to be junked and modern ranges sold in their place. The member companies of the Southern Gas Association serve approximately 1,480,000 residential customers, and if we apply the data as given us by the American Gas Association to our own thirteen States represented here, we find that our prospects for ranges in 1934 by replacement of obsolete stoves, to be in excess of 350,000. Actual surveys made by some of the companies show that more than one-half of the gas ranges in use at the present time should be replaced. Approximately 100 per cent of our residential customers have gas ranges, and due to the fact that for the most part they are non-automatic, uninsulated, obsolete types, a fertile field is provided for the salesmen of ranges using competing fuels. In so far as the domestic field is concerned, our major problem is not the service offered by competitive fuels. Gas for cooking, water heating, and refrigeration has proven its superiority. It is the worn-out equipment using our own service that must be replaced in order for us to be secure against our competitors.

Actual surveys made by a number of companies show that less than 30 per cent of their residential customers have water heaters in good condition. Applying this to the residential customers in our territory, we have a potential market of more than one million water heaters.

Now I have tried to give you a picture of the existing market for range and water heater sales alone. I have not attempted to estimate the large potential market for space heaters, circulators, floor furnaces, gas steam radiators, or central heating plants; nor have I tried to picture the market for gas refrigerators, which offers us one of the best methods of increasing our revenues and protecting our load.

Now that economic conditions are on the upgrade and we have daily the evidence of better times, the market for gas-consuming appliances and equipment is opening up. The wide-awake merchants will take advantage of this market, and if these merchants are not made allies of gas companies, they will become dealers of competitive fuel equipment.

Planning Sales Program

Building a sales program and following through step-by-step, day-by-day, are the two essentials necessary for the success of any sales activity. So in planning a sales program, first, a complete market survey must be made. We must think of demand and then of supply, must be thoroughly informed as to where the market exists, must know the seriousness of our competition and have a true picture of all the ways in which gas may be used. After such a survey has been made, we can then plan our sales activities. Our selling forces must be strengthened both in numbers and training. Sales representatives and employees must be equipped with their most essential aide —knowledge. Means to increase the effective selling time must be developed. Success in selling is bought with effort—watching for every opportunity—keeping continuously at it. We are in a selling era. There are big things ahead for those prepared to take advantage of the opportunities that will present themselves.

A gas utility obtains its franchise on the premise that it is a public servant. Therefore, the utility has incurred an obligation to make its service most widely useful to the public. It assumes a responsibility to promote better home conditions, higher standards of living, comfort, convenience, saving of time and freedom from drudgery.

The problem of selling gas and gas consuming equipment in smaller territories presents a problem somewhat different from that of selling in the larger properties. It is felt that employee selling offers one of the best solutions to this question. Employee selling cannot be measured entirely by the number of leads brought in or the actual sales made. There is an intangible benefit in the form of customer good will which is of immeasurable value to a company.

In one of our larger companies last year, regular employees, not on the sales force, sold more than 50 per cent of the ranges and more than 49 per cent of the water heaters. A number of these employees have studied and developed considerable sales ability of which they were unaware. As far as sales ability and knowledge of the product is concerned, it depends largely on the man himself, but literature and information are available from the American Gas Asssociation and the various manufacturers, and can be obtained and studied by employees if they desire. We find that many employees are taking practical training in every form of customer and public contact, in domestic and industrial gas salesmanship, etc., fitting themselves for an enlarged opportunity for helpful service. While employee

*Address before Southern Gas Association and Southern-Southwestern Gas Sales Conference, Memphis, Tenn., March 21, 1934.

efforts on selling are most desirable and helpful, employee selling should supplement and not supplant the work of trained salesmen who can close the actual sales.

One difficulty in the past has been the inability to keep salesmen in smaller territories profitably during periods of dull business. The advent of the gas refrigerator now makes it possible to employ salesmen in many territories that were once considered unproductive.

To build up the domestic load in smaller territories requires salesmanship of a high order. It requires men who are especially trained for this type of work, because only when the advantages of the service are properly presented to the public and the customer realizes that there is more involved than merely the sale of a particular appliance for a certain service and a certain price, does it become possible to build up this class of business in a permanent and profitable manner. Basically the domestic salesman's job is similar to that of the industrial salesman. He must be able to do in the home what the industrial representative does in the shop or factory. He must be able to determine just what additional service is necessary to fill the customer's needs, and to recommend the type and kind of appliances best fitted for the purpose.

Enthusiasm Essential

The domestic salesman will not be able to do this intelligently unless or until he has had the right kind of training for this work. By the right kind of training, I mean a definitely outlined schedule of instruction and information which will equip him for his duty. He must have a background of knowledge about the industry he represents. He must have a thorough knowledge of his own company—its policies, its objectives, and particularly its ability to deliver the service which he is endeavoring to sell. He must have all the information about the different appliances through which the service is made available to the customers.

Only after he has absorbed enough of this information to have his interest thoroughly aroused and to reach the point where he carries to his work the sincere conviction that he is rendering the customer a beneficial service, can it be said that he is a trained domestic salesman.

It goes without saying that salesmen must be enthusiastic, and it is possible through group meetings and inspirational talks to bring a salesman to this high pitch of enthusiasm. But it is easy enough for that salesman to lose his enthusiasm after a few calls; in fact, it is probable that he will reach a mental state of utter discouragement if he has not a proper background of information and training to fortify his initial enthusiasm.

The salesman must have a thorough knowledge of the benefits of the service he is selling. The appliance is merely the means to an end. His story must be told in terms of service rendered—lessening household labor, increasing conveniences, economical advantages, etc., but the salesman must also be so well acquainted with the various appliances that he can suggest very accurately the particular appliances that will render the best possible service to that home.

The consummation of an appliance sale does not end the company's nor the salesman's responsibility to that customer. If the salesman has such an idea, he has not been completely educated in the essentials of good salesmanship for residential load building. The service just begins when the appliance is put into use, and it must continue to be satisfactory, if the load is to be built up in a permanent manner. If the buyer becomes dissatisfied because of the failure of the appliance to perform properly or because of his lack of proper understanding of its use, it would be better for the company had it remained unsold; whereas, if the salesman has been skillful in determining the needs of the prospect and has suggested and sold the appliances through which the customer receives satisfactory service, that customer remains a good prospect for other appliances; that home will gradually become completely gas-equipped, and by the same token, the company will develop its best advertisement for building up the load among other customers who are not so well equipped with gas appliances.

Make All Employees Sales Conscious

Whether or not the utility is actively engaged in merchandising appliances through which the load is built, it is possible to increase the service in a large percentage of the homes served, by means of the proper type of educational and promotional work. Service crews, meter readers, collectors, and survey workers who contact the home, if accurately guided and on the alert themselves, can supply the information which forms the prospect list toward which intensive effort to increase service can be directed. These men have many opportunities to observe what use the domestic customer is making of the service and can suggest to the load-building department those who are prospects for increased service of one kind or another. Where a survey is conducted over company lines, very definite and complete information can be secured.

In addition to the above classes of workers, it is possible to make practically every other employee of a utility sales conscious enough to turn in the names of prospects for additional service by offering the proper incentive. These employees can be made the prospectors, so to speak, who supply the names upon which the domestic salesman will work. If this sort of work is skillfully done—if all employees are made sales conscious—it is a tremendous asset to the utility in its general sales program to build up the domestic load.

It must be appreciated that the gas companies are not in a position to sell the entire market for domestic appliances, and likewise the dealers themselves are not able to do this complete job. J. French Robinson, vice-president of the Columbia Natural Gas Company, recently made the following statement:

"We of the gas industry must focus our activities on finding a market for our product.

"Our continued existence depends upon keeping present customers on our lines and adding new ones. Appliances must be sold to replace obsolete models and to make possible new uses of our service. On the question of retail merchandising, the only answer is that we must take the lead if it is to be done at all. Independent merchants cannot be expected to sell only gas appliances. They are just as willing to sell a coal stove as a gas

one. They are sensible enough to carry what the customer wants."

The dealer and gas company must supplement each other; neither can afford to supplant the other. It will require the co-ordination of the gas company and the dealer to put this job over, and if this is not done, the gas industry is in danger of losing a large share of its domestic load. As a general rule, the standard of appliances sold by the gas companies is higher than that sold by dealers, and it is evident, of course, that the gas company should lay down a fair merchandising policy and adhere to it, in order to encourage dealers to sell approved types of appliances. The gas company salesman or employee should realize that the objective of the company is to increase the use of gas service and that the dealer can be helpful to him and his company in load building work. The utilization of retail dealers necessarily requires the maintaining of prices by the utility. The utility's prices and terms should be such that dealers can sell at a fair margin to themselves.

Domestic salesmen should be fully acquainted with the utility's advertising program to stimulate increased use of service. If the advertising is properly planned and prepared, if it fits into the general sales program of load building, then it is certainly a valuable tool which the salesman can use to advantage in his work. Therefore, as a part of the salesman's training and as an essential help in his field work, he is entitled to have a complete explanation of the way in which advertising may be used to advantage in his work. Whenever possible, he should have copies of the material used.

It is a fact proven by experience that the efficiency of selling campaigns has been increased as high as 50 per cent through intelligent use of advertising by salesmen. Likewise, it has been proved that the effectiveness of advertising, particularly as to customer appeal, is greatly increased when the advertising department, prior to writing the copy, seeks the suggestions and advice of the individual salesmen. Swivel chair advertisements or syndicate service copy often sounds fine and may look well on paper, but unless the advertising is designed to meet and overcome the objections most frequently encountered by salesmen in their work, it is not the most effective type.

Sales meetings are, of course, a part of the training course for domestic salesmen. The benefit to be derived from these meetings is in direct proportion to the amount of care given to the preparation and conducting of group meetings. Many utilities have found it advantageous to hold their meetings in the evening after regular business hours so that sufficient time is allowed for the interchange of ideas, in addition to the program of instruction delivered at the meeting.

To summarize, sales planning for better times, should take into consideration: First, a realization of the potential market as it exists today; second, a detailed survey of the equipment of present customers, to determine the type and amount of business that is most profitable; third, the working out of a comprehensive sales program; fourth, the educating and training of employees for selling; fifth, the strengthening of the regular sales force and intensifying sales effort; sixth, enlisting the support of dealers in sales work; and, seventh, utilizing advertising to support company and dealer sales effort.

Results will only be obtained through hard work, even under the most ideal selling conditions, but by making use of some of these basic factors in planning the activities and then conscientiously following them as outlined, we can protect the existing markets for gas and develop new and greater markets.

General Committee To Take Place of P. and A. Section

LOOKING toward more effective work in its field, the Association's Publicity and Advertising Section has been abolished, and in its place will be substituted a Publicity and Advertising Committee, which will be appointed by President H. O. Caster. This change was the outcome of a discussion of the subject by all members of the Publicity and Advertising Section, in Chicago, last September, when the idea was advanced that more productive work could be done by creating a general committee to take over the work.

The subject was presented to the Control Committee, and upon its recommendation the president of the Association appointed the following committee to consider what action might be taken on the reorganization of publicity and advertising activities and the future of the section: P. S. Young, chairman; N. T. Sellman, F. B. Jones, E. M. Tharp and Henry Obermeyer.

After careful study of the situation, this committee recommended to the Executive Board that the section be discontinued and a general committee be substituted. It further urged that the committee, with the director of publicity and advertising, plan, counsel and coordinate the publicity and advertising of the industry, in cooperation with the National Directing Committee of Executives, and other general and sectional committees, member companies and groups of member companies, and be advisory to the managing director.

The committee also advocated that a Publicity and Advertising Bureau be maintained at Association Headquarters and that the chairman of the proposed committee be a member of the Executive Board and of the National Directing Committee of Executives.

These recommendations were approved by the Board on January 10, but in order to carry out the change certain amendments to the Constitution and By-Laws of the Association were necessary. On March 8, approval of all members of the Association was sought, and at the close of the poll, April 9, the changes were approved, practically unanimously.

As soon as members of the newly created committee have been appointed by President Caster, they will hold an organization meeting and elect their chairman and vice-chairman.

Substitution of a general committee to take over the functions of the section marks a new chapter in the Association's advertising and publicity activities. Under the chairmanship of the late George Williams, of New York, the "Advertising Section"—later changed to Publicity and Advertising Section—came into existence on June 26, 1919, at a meeting held at Association headquarters. H. K. Dodson was elected vice-chairman, and Charles W. Person, secretary. The initial meeting of the section's managing committee took place the following September.

From the inception of the Association's advertising and publicity work, men prominent in the industry have had an active part in it. M. C. Robbins, of New York, followed Mr. Williams as Chairman. Other chairmen included: B. J. Mullaney, Chicago; J. M. Bennett, Philadelphia, two terms; F. L. Blanchard, New York, two terms; the late Harlow C. Clark, Newark, N. J.; E. Frank Gardiner, Chicago, two terms; D. M. Mackie, Jackson, Mich.; Wm. H. Hodge, Chicago; J. C. Barnes, New Orleans, and Henry Obermeyer, New York.

Planned Industrial Gas Promotion Through Window Displays

By J. A. MALONE*

THE movement to utilize the attention value of industrial window displays to promote the use of gas in general is receiving considerable attention in the industry. The basic thought is that by focusing attention on some of the very interesting applications of gas in industry, a favorable reaction will be produced on the public as to the fact that gas is a thoroughly modern and up-to-date fuel. This is brought out by showing such uses by large and well-known manufacturers or by presenting applications in processes of manufacture with which the public is familiar. In many cases the products produced through the use of gas are shown, and those selected are, of course, very high class products of attention-getting nature.

Several photographs are shown herewith, these being actual displays which appeared in the windows of the gas companies mentioned. The Detroit City Gas Company started a series of such displays beginning with one of the Hupmobile factory. This display was attractively laid out and showed a photograph of the interior of this automobile plant, with samples of a few of the products made with gas fuel.

Toys Featured

The next display in this series was one featuring the use of industrial gas in the manufacture of mechanical toys. This displayed some of the articles made by the American Metal Products Company. No photograph of this window is available but it is reported that this window attracted a great deal of attention. It was shown during the Christmas season of 1933.

A window display featuring the baking industry followed. A traveling oven in the Continental Baking Company's plant in Detroit was shown together with a number of loaves of bread arranged to indicate their coming from the exit end of the oven. The display called attention to the fact that 1,500 tons of Wonder Bread are baked in Detroit every month—"Enough to reach from here to New York if placed end to end."

The next window display in this series was devoted to the Packard Motor Company. Two pictures were included in this display, these being the original oil paintings which were used in the production of the current magazine advertising of the Packard Motor Company. In the lower part of this window was a showing of eighty-three different kinds of sand cores used to cast the Packard engine. Attention was also called to the fact that these cores were baked by means of gas fuel. An enlarged photo was also shown, this being a picture of the core oven, with the explanation that the cores travel 220 feet through this oven requiring about 3½ hours.

The Detroit City Gas Company has in preparation two other windows treating of similar applications of gas fuel. This company plans to use one window for one month for each of a number of different companies. They report that a surprising amount of interest has been developed by these displays. If this interest continues they expect that their program will be continued indefinitely.

The Consolidated Gas Company of New York is continuing a systematic program of industrial window displays which was started sometime ago. Some photographs of recent displays in this series are shown. A new window is planned for every month and the subject matter is selected as the most timely for the particular month concerned. These window displays are started at the main office building and are then routed to appear in windows of various branch offices.

A sufficient number of photographs of industrial window displays have been assembled by the Display and Contact Committee to invite consideration of an idea of having a special service on such displays. The service contemplated would involve a reproduction of all industrial window displays available, these to be made up and perforated in such a manner as to be available for filing vertically or in a standard binder.

Plan Economical Service

Along the bottom of each reproduction would be a brief tabulation indicating the subject matter of the display, the month and year in which it was shown, the name of the gas company, the general color scheme in brief form and any other immediately pertinent data. This tabulated information would be presented in such a way that the photographs could be filed either by the month of appearance or by the subject matter of the display.

For such companies as would be interested in this service, it is the plan to send two copies of each photograph. One could thus be filed by the month of appearance and one by the subject matter. In this way any company could build up a reference album from which they could obtain useful ideas in working up their own window displays in the future. Thus, if it were desired to make a program for sometime ahead, the gas company concerned could look over the ideas which have been used by other companies as to seasonal appeal and timeliness and could, no doubt, cull a good deal of useful information from such study.

The cost of reproduction of these photographs is a factor, but it is believed that this can be worked out in such a way as to enable the committee to offer this service on a nominal basis. The interest which has already been aroused in connection with this industrial window display program seems to indicate that its value is conceded to be substantial. The indirect angle of promotional appeal to such classifications as domestic users of gas is one of the main factors in the attention which this program is receiving.

* Mr. Malone is chairman of the Committee on Display and Contact, Industrial Gas Section, American Gas Association.

Typical Industrial Gas Window Displays

Upper and left center are examples of displays used by the Consolidated Gas Company of New York. Right center and lower illustrations show exhibits of the Detroit City Gas Company

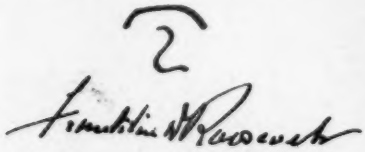
Autographed Cattle Brands Win Good Will for Gas Company

M. F. Peters

APPLICATION of a hobby has drawn many customers to the office of the West Texas Gas Co., at Midland, Texas, and as a result hundreds have been reminded of the convenience and desirability of using natural gas.

This unusual promotional work is the result of the enterprise of Marion F. Peters, district manager of the West Texas Co. in charge at Midland. From the great and the near-great he has assembled a collection of cattle brand "autographs."

"I have got mixed up with every breed of autograph hunters," said Will Rogers, comedian, "but I never heard of a guy wanting a cow's autograph before." However, Mr. Rogers, along with scores of other celebrities, made his contribution. Replying to Mr. Peter's request, Mr. Rogers wrote: "I am surprised you didn't write to the cow. Why don't you collect cattle with the brands on 'em, they are as cheap as the paper you write the brands on?"



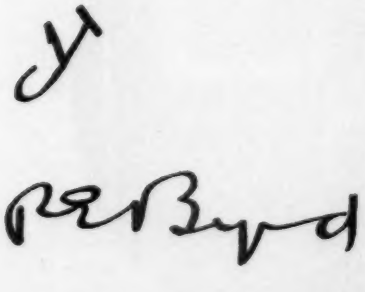
The President's contribution

Collection of autographed cattle brands grouped around radiant heater sales display of West Texas Gas Company, Midland, Texas

Mr. Peter's collection, said to be the only one of its kind, is made up of drawings actually executed and autographed by leaders in national affairs, including President and Mrs. Roosevelt, Vice-President and Mrs. Garner, senators, governors of various States, movie stars, famous fliers, newspaper men and others. Prince Viggo, of Denmark, and Charles T. Conner, the man who designed the Blue Eagle, are among more recent contributors.

George Bernard Shaw is among those who declined Mr. Peters' invitation to contribute to the collection. At the bottom of the request, Mr. Shaw wrote: "Why? There is evidently some catch in this. Explain!" A full explanation, attested by the Mayor of Midland, a Chamber of Commerce official, a sheriff and a banker, was sent Mr. Shaw. His final comment was: "I am more in the dark than ever, and can only say that I regard the branding of cattle as a horrible and hellish practice."

Mr. Peters has grouped part of his collection on the display floor of the



Admiral Byrd drew a brand

Ripley must believe in it

Midland office, and here hundreds of customers inspect the unusual array.

Mr. Peters has applied his idea in a section where cattle raising is a leading industry, and he said that it already has resulted in widening confidence and good will toward the West Texas Company.

"Cattle-brands," explained Mr. Peters, "are the basis of a language that is near and dear to the heart of every rancher, cattleman or cowhand, and Midland's population is composed in a large part of this class of people. Often the acceptance of a certain brand is a sacred event in the life of a rancher. As the brands are chosen from a letter of the alphabet, letter combination or figure, or character, they must be registered with the County Clerk.

"A list of the brands which are alive in Midland County, that is, brands that are in use by ranchers who are solvent and customers of the gas company, was compiled by me. I copied them, and then submitted one to a prominent individual, requesting that the brand be copied and then signed. The result is my collection, to which people in many parts of the world have contributed."

Photostatic copies of the drawings are frequently requested by customers who call at the office, subsequently are framed and find a permanent place in Midland homes.

Mr. Peters believes that similar ideas built around leading industries in other sections would be helpful in stimulating public good will and individual interest and prove an asset as a means of attracting customers.

Typical gas furnace display at National Metal Exposition

National Metal Congress and Exposition

W. H. Phillips
President, American Society for Metals

THE sixteenth annual National Metal Congress and Exposition will be held in New York City, October 1-5, 1934, according to an announcement recently received from headquarters of the American Society for Metals, formerly the American Society for Steel Treating, under whose auspices the Congress and Exposition have become the meeting ground for men of the metal industries.

This announcement is of special interest to the American Gas Association because since 1924 the cooperative displays of industrial gas furnaces, burners and other appliances have been a feature of the Exposition.

R. G. Guthrie
Past President American Society for Metals

New York has never before been visited by the National Metal Congress and Exposition, primarily because of a lack of suitable location for the show. This obstacle was recently removed by the completion of Commerce Hall in the Port Authority Building, at Fifteenth Street and Eighth Avenue, where the Ford Motor Company recently held its very successful show.

W. H. Eisenman, secretary of the American Society for Metals, has completed arrangements which will assure exhibitors of the same low prices for space, booth equipment and special services which prevail in Cleveland, Detroit and elsewhere. There will be no restrictions as to floor loads and furnaces will be allowed to operate.

A 1934 innovation in connection with the technical programs of the National Metal Congress will be a series of highly practical lectures on metallurgical problems. These lectures will supplement but not supplant the technical papers which record progress in metallurgy.

W. H. Eisenman
Secretary American Society for Metals

Among the subjects which are being considered as lecture material are the hardening of tool steels and the melting of different types of steels. Men will be selected to give the lectures on the basis of a broad practical experience and their ability to impart their knowledge.

The years have built up a real background for the 1934 Congress and Exposition. The first Exposition was held in Chicago in 1919 and was attended by 10,000 people. Every year since then succeeding expositions have grown steadily in interest and have served to bring together the men whose duties include the specifying or purchasing of equipment and materials.

The following list shows the location of each of the sixteen expositions and the attendance at each:

1919—Chicago, 10,000; 1920—Philadelphia, 12,000; 1921—Indianapolis, 10,000; 1922—Detroit, 20,000; 1923—Pittsburgh, 40,000; 1924—Boston, 43,000; 1925—Cleveland, 40,000; 1926—Chicago, 80,000; 1927—Detroit, 61,500; 1928—Philadelphia, 50,500; 1929—Cleveland, 53,100; 1930—Chicago, 65,000; 1931—Boston, 51,200; 1932—Buffalo, 44,500; 1933—Detroit, 57,500.

Affiliated Association Activities

New Jersey Gas Association

E. J. Menerey

E. J. MENEREY, president of the Peoples Gas Company, Glassboro, N. J., was elected president of the New Jersey Gas Association at the twenty-third annual convention held in Trenton, March 22. Other officers elected were: Herbert E. Cliff, of the Public Service Electric & Gas Co., first vice-president; William S. Potter, of the Elizabethtown Consolidated Gas Co., second vice-president, and George Webber, of the Public Service Electric & Gas Co., secretary-treasurer.

More than 400 members attended the convention which was judged one of the most successful in recent years. Frederick A. Lydecker, of the Public Service Electric & Gas Co., president of the association, presided.

Among the speakers were Judge Herbert O. Caster, president of the American Gas Association; Percy S. Young, vice-president of the Public Service Electric & Gas Co.; Alexander Forward, managing director of the American Gas Association; and others prominent in the industry.

Southern Gas Association

W. W. Winter

THE twenty-sixth annual convention of the Southern Gas Association, held in the Hotel Peabody, Memphis, Tenn., Mar. 21-23, in conjunction with the Southern-Southwestern Gas Sales Conference of the American Gas Association, was attended by 300 delegates, including some of the leading executives of gas companies. B. B. Ferguson, president of the Portsmouth Gas Company, Portsmouth, Va., presided over the sessions.

W. W. Winter, of Atlanta, Ga., was elected to succeed Mr. Ferguson as president of the association. Other officers and directors elected were: C. B. Gamble, Birmingham, Ala., first vice-president; H. E. Meade, New Orleans, La., second vice-president; S. L. Drumm, New Orleans, La., secretary-treasurer. Directors—L. H. Hungate, Jr., Memphis, Tenn.; Edgar Morris, Washington, D. C.; C. L. Ridley, Nashville, Tenn.; W. S. Russell, Atlanta, Ga.; E. S. Dickey, Baltimore, Md.; R. F. Fledderman, Hamilton, Ohio; D. H. Levan, Jacksonville, Fla.; and J. V. Strange, Houston, Texas.

An ambitious program was carried through, many capable speakers covering a wide range of subjects. One of the noteworthy contributions was made by Frank L. Chase, chairman of the Natural Gas Department of the American Gas Association and vice-president of the Lone Star Gas Co., Dallas, Texas, who spoke on the "Future of the Natural Gas Industry."

All of the sectional meetings, as well as the sales conference sessions, were exceptionally well attended.

Attractive entertainment features were under the direction of Paul Renshaw, chairman of the Entertainment Committee.

Canadian Gas Association

HERBERT W. ALRICH, assistant engineer of construction, Consolidated Gas Company of New York, will present one of the principal papers before the twenty-seventh annual convention of the Canadian Gas Association, to be held June 4-5 at the Windsor Hotel, Montreal, Quebec, according to the tentative program announced by George W. Allen, secretary-treasurer. Mr. Alrich's paper, "Servicing Gas Holders," will be one of several presentations on a program featuring practical problems. A problem of related interest will be covered by H. C. Osler, superintendent, gas stations, Montreal Light, Heat & Power Co., in a paper on "Operating and Checking a Waterless Gas Holder."

The practical character of the convention is further emphasized in an announcement of a "Question Box Hour," during which there will be a general discussion of important operating problems, as well as other pertinent subjects confronting gas utility men.

Additional papers of a technical and engineering nature to be presented include: "For and Against Rubber Main Joints," by J. D. Von Maur, engineer of distribution, Consumers' Gas Company of Toronto; "Producer Gas Fuel Practice" by L. T. Calhoun, chief chemist, Montreal

Convention Calendar

MAY

1- 4 U. S. Chamber of Commerce
Washington, D. C.

8-9-10 Pennsylvania Gas Association
Wernersville, Pa.

9-11 Natural Gasoline Association of America
Tulsa, Okla.

18 Mid-West Industrial Gas Sales Council
Palmer House, Chicago, Ill.

12-19 International Petroleum Exposition
Tulsa, Okla.

14-18 National Fire Protection Association
Haddon Hall, Atlantic City, N. J.

21-22 A.G.A. Joint Committee Conference of Production and Chemical Committees
Hotel New Yorker, New York, N. Y.

22-24 Mid-Year Meeting—American Petroleum Institute
Pittsburgh, Pa.

24 National Board of Fire Underwriters
New York, N. Y.

JUNE

1- A.G.A. Executive Conference
Traymore Hotel, Atlantic City, N. J.

4- 5 Canadian Gas Association
Montreal, Canada

4- 7 Edison Electric Institute
Atlantic City, N. J.

5- 8 The Institution of Gas Engineers
London, England

18-21 National Association of Purchasing Agents
Cleveland, Ohio

25-29 American Home Economics Association
Pennsylvania Hotel, New York, N. Y.

25-29 American Institute Electrical Engineers
Hot Springs, Va.

25-29 American Society for Testing Materials
Chalfonte-Haddon Hall, Atlantic City, N. J.

SEPTEMBER

1- 4 International Gas Association
Zurich, Switzerland

9 American Trade Association Executives
Wernersville, Pa.

11-13 Pacific Coast Gas Association
Del Monte Hotel, Del Monte, Calif.

24-28 American Transit Association
Cleveland Public Auditorium, Cleveland, Ohio

OCTOBER

14-19 American Dietetics Association
Mayflower Hotel, Washington, D. C.

Wk. 29 American Gas Association Convention and Exhibition
Atlantic City, N. J.

Associations Affiliated With A. G. A.

Canadian Gas Association
Pres.—Donald G. Munroe, Montreal Coke & Mfg. Co., Montreal, Que.
Sec.-Tr.—G. W. Allen, 21 Astley Avenue, Toronto.

Empire State Gas and Electric Association
Pres.—Alfred H. Schoellkopf, Niagara Hudson Power Corp., Buffalo, N. Y.
Chairman, Gas Section—A. M. Beebee, Rochester Gas & Electric Corp., Rochester, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.

Illinois Public Utilities Association
Pres.—Bernard J. Mullaney, The Peoples Gas Light & Coke Company, Chicago, Ill.
Sec.—J. R. Blackhall, Suite 1213, 79 West Monroe St., Chicago, Ill.

Indiana Gas Association
Pres.—R. S. Brunner, Indiana Gas Utilities Co., Richmond, Ind.
Sec.-Tr.—P. A. McLeod, New Castle, Ind.

Michigan Gas Association
Pres.—Walter E. White, Commonwealth & Southern Corp., Jackson, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.

Maryland Utilities Association
Pres.—W. A. Tobias, Hagerstown Light & Heat Co., Hagerstown, Md.
Sec.—C. R. Burger, 26 South Jonathan St., Hagerstown, Md.

Mid-West Gas Association
Pres.—R. L. Klar, Des Moines Gas Co., Des Moines, Iowa.
Sec.-Tr.—Roy B. Searing, Sioux City Gas & Electric Co., Sioux City, Iowa.

Missouri Association of Public Utilities
Pres.—Fred Karr, St. Joseph Gas Co., St. Joseph, Mo.
Sec.-Tr.—N. R. Beagle, Missouri Power & Light Co., Jefferson City, Mo.
Asst. Sec.—Jesse Blythe, 103 West High St., Jefferson City, Mo.

New England Gas Association
Pres.—F. M. Goodwin, Boston Consolidated Gas Co., Boston, Mass.
Exec. Sec.—Clark Belden, 41 Mt. Vernon St., Boston, Mass.

New Jersey Gas Association
Pres.—E. J. Menerey, Peoples Gas Co., Glassboro, N. J.
Sec.-Tr.—G. B. Webber, Public Service Electric and Gas Co., Newark, N. J.

Ohio Gas and Oil Men's Association
Pres.—L. K. Langdon, Union Gas & Electric Co., Cincinnati, Ohio.
Sec.-Tr.—Wm. H. Thompson, 811 First National Bank Bldg., Columbus, Ohio.

Oklahoma Utilities Association
Pres.—H. B. Cobban, Northeast Oklahoma Railroad Co., Miami, Okla.
Mgr.—E. F. McKay, 1020 Petroleum Bldg., Oklahoma City, Okla.

Pacific Coast Gas Association
Pres.—Geo. P. Egleston, H. R. Basford Co., San Francisco, Calif.
Mang. Dir.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.

Pennsylvania Gas Association
Pres.—A. J. Llewellyn, Luzerne County Gas & Electric Corp., Luzerne, Pa.
Sec.—Frank W. Lesley, Pennsylvania Gas & Electric Co., York, Pa.

Pennsylvania Natural Gas Men's Association
Pres.—F. F. Schauer, Equitable Gas Co., Pittsburgh, Pa.
Sec.-Tr.—B. H. Smyers, Jr., 435 Sixth Ave., Pittsburgh, Pa.

Southern Gas Association
Pres.—W. W. Winter, Atlanta Gas Light Co., Atlanta, Ga.
Sec.-Tr.—S. L. Drumm, New Orleans Public Service Inc., New Orleans, La.

The Public Utilities Association of Virginia
Pres.—T. Justin Moore, Va. Elec. & Power Co., Richmond, Va.

Wisconsin Utilities Association
Pres.—R. G. Walter, Wisconsin Power & Light Co., Madison, Wis.
Exec-Sec.—J. N. Cadby, 135 West Wells St., Milwaukee, Wis.

Coke & Mfg. Co.; and "Purification of Gas Works Waste Water" by Allyn C. Taylor, president, Consumers Gas Co., Reading, Penn.

The problem of promotional rates will be handled by O. L. Maddux, industrial engineer, United Gas & Fuel Co. of Hamilton, Ltd., in a paper entitled "Promotional Rates for Gas Service." Other subjects appearing on the tentative program are: "Sales Promotion Work for the Future of the Gas Industry," by M. L. Kane, general sales manager, Union Gas Co. of Canada, Ltd., Chatham, Ontario, and "Employee Education—Looking Toward Sales, Goodwill and Public Relations," by S. B. Severson, vice-president, Dominion Natural Gas Co., Ltd., Buffalo, N. Y.

Special entertainment features will be announced in the final program. Official headquarters will be at the Windsor.

Mid-West Gas Association

C. T. WILLIAMS, assistant general manager of the Sioux City Gas and Electric Company, was elected president of the Mid-West Gas Association at the twenty-ninth annual convention held in Sioux City, Iowa, April 16-18. Other officers elected follow:

F. R. Brooks, Omaha, Neb., first vice-president; H. M. Smith, Waterloo, second vice-president; R. B. Searing, assistant secretary and treasurer.

Executive Council: One-year terms—A. H. Abbott of Minneapolis, F. W. Budd of Winfield, Kan., A. L. Fritchey of Des Moines and C. I. Merrick of Ames. Two-year terms—M. C. Brandt of Waterloo, T. E. Rooke of Rockford, Ill., Stanley Taber of Lincoln and R. E. Tunwell of Davenport. Three-year terms—H. R. Pierce of Davenport, C. R. Dunshane, Jr., of Chicago, A. C. Rothkey of Waterloo and T. A. Leisen of Omaha.

Alexander Forward, managing director of the American Gas Association, was one of the principal speakers before the convention. His address is printed elsewhere in this issue of THE MONTHLY. Other speakers included: George A. Neal, general manager of the Sioux City Gas and Electric Company; P. A. Stover, Cedar Rapids; J. A. Perry, Philadelphia; F. J. Gunther of Lincoln; L. C. Harvey of Cleveland, and A. W. Schmidt of Des Moines.

Pennsylvania Gas Association

A. J. LLEWELLYN, president of the Pennsylvania Gas Association, has announced the completion of the program for the annual convention of that association to be held at Galen Hall, Wernersville, Pa., on May 8, 9 and 10. It is expected that about 300 members and guests will attend.

The program includes addresses by the

Hon. Joseph B. Shannon, Congressman from Missouri, and H. O. Caster, president of the American Gas Association, at the opening banquet meeting on the evening of May 8.

On May 9, Hall M. Henry of the Utilities Management Corporation, New York, will open the morning meeting with a talk on "A New Approach to Gas Water Heating Sales." The program for this morning meeting also includes R. L. Hallock, assistant to vice-president, Electrolux Sales, Inc., who will talk on "Gas Refrigeration—Its Importance to the Gas Utility"; George W. Ousler, Equitable Gas Co., Pittsburgh, Pa., "The Value of Home Service for Building Good Public Relations," and a "House Heating Presentation," which will stress winter aid conditioning with gas, and a paper on "Unaccounted for Gas," delivered by Paul A. Fusselman, of the Philadelphia Electric Company, Philadelphia, Pa.

The afternoon will be devoted to golf, tennis, baseball and other sports.

At the banquet meeting on the evening of May 9, the principal speakers will be Dr. Neil Carruthers, dean of Business Administration College, Lehigh University, and Alexander Forward, Managing Director of the American Gas Association.

Dr. M. S. Viteles, director of personnel research, Philadelphia Electric Company, will open the morning meeting on May 10, with a paper on "Training of Employees for Promotion of Good Will and Sales." Other papers to be presented at this meeting will be "Advertising Suggestions for the Smaller Utility," by L. Swinehart, N. W. Ayer & Sons, Philadelphia, Pa.; "Pilot Outages," W. H. Fulweiler, The United Gas Improvement Company, Philadelphia, Pa.; "Merchandise Accounting," M. H. Parkinson, Penn Central Light & Power Company, Altoona, Pa.; and the meeting will be closed with a playlet by employees of The Philadelphia Gas Works Company on "Making Over the Kitchen."

An outstanding entertainment program has been completed for both the evening meetings.

Maryland Utilities Association

W. A. Tobias

ESCHEWING social features, members attending the annual convention of the Maryland Utilities Association, held in Baltimore June 23, devoted themselves to discussion of business problems. In making up the program, it had been agreed that there never before was a time when the business side of the association was more important and entertainment functions less needed.

Practically all of the utilities in the State and the District of Columbia were represented. One of the principal speakers was William H. McClenhan, president of the Potomac Electric Power Company, Washington.

The following officers were elected:

W. A. Tobias, Hagerstown Light & Heat Co., Hagerstown, Md., President; G. P. Mangan, Potomac Electric Power Co., Washington, D. C., Vice-president; C. R. Burger, Hagerstown Light & Heat Co., Hagerstown, Md.; F. A. Alexander, Conowingo Power Co., Elkton, Md., Treasurer.

Directors—F. A. Mitchell, Eastern Shore Public Service Co., Salisbury, Md.; Tom Graham, Eastern Shore Public Service Co., Salisbury, Md.; R. F. Bonsall, Consolidated Gas, Electric, Light & P. Co., Baltimore, Md.; D. E. Stultz, Potomac Edison Co., Hagerstown, Md.; T. B. Hopper, Washington Gas Light Co., Washington, D. C.; Ed. S. Pardoe, Capital Traction Co., Washington, D. C.

Officers and directors voted to hold the mid-year meeting of the association during September and a committee was named to work out details.

Metropolitan Council Meets May 16

THE seventh annual open meeting of the Metropolitan Industrial Gas Sales Council of New York will be held May 16, at the St. George Hotel, Brooklyn, N. Y.

This meeting usually is attended by members of the Council, and also industrial sales representatives of the utility companies having representation in the Council.

The Council invites all utility representatives who are interested, either directly or indirectly in industrial gas work, to attend this meeting.

A registration fee of $2 is charged, which covers the cost of the meeting and luncheon.

The program follows:

9:30 A.M. Address by Chairman, J. F. Quinn, The Brooklyn Union Gas Company, Brooklyn, N. Y.

9:40 A.M. Modern Equipment and Material for Better Selling, R. H. Staniford, The Brooklyn Union Gas Company, Brooklyn, N. Y.

10:20 A.M. The Importance of Modernization in Industrial Plants and Commercial Establishments, J. P. Leinroth, The Public Service Electric & Gas Co., Newark, N. J.

11:00 A.M. Better Results by Modern Methods in Stereotype Melting, N. E. Bertl, The Consolidated Gas Company, New York, N. Y.

11:20 A.M. Industrial Gas—The Premier Fuel of a United Industry, F. A. Coogan, The Kings County Lighting Co., Brooklyn, N. Y.

2:15 P.M. This session will be devoted to a general discussion of the accomplishments and effects of modernization.

The committee feels that the broad scope of this subject will lend itself to a free exchange of ideas and experiences for the advancement of gas fuel.

To Discuss Gas Sales at New London Meet

THE New York-New England Regional Gas Sales Conference will meet at the Hotel Griswold, New London, Conn., June 28-30.

Hugh Cuthrell, of The Brooklyn Union Gas Company, Brooklyn, N. Y., is chairman, and R. H. Knowlton, of The Connecticut Light & Power Co., Hartford, Conn., vice-chairman. Other members of the Council in charge of the program are:

Cyrus Barnes, Charles H. Tenney & Co., Boston, Mass.; F. D. Cadwallader, Boston Consolidated Gas Co., Boston, Mass.; H. E. Dexter, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y.; F. M. Goodwin, Boston Consolidated Gas Co., Boston, Mass.; Howard B. Hall, Old Colony Gas Co., East Braintree, Mass.; R. J. Rutherford, Cambridge Gas Light Co., Cambridge, Mass.; J. A. Sackett, Kings County Lighting Co., Brooklyn, N. Y.; W. J. Schmidt, Long Island Lighting Co., New York, N. Y.; N. T. Sellman, Consolidated Gas Co. of New York, New York, N. Y.; H. P. J. Steinmetz, Public Service Electric & Gas Co., Newark, N. J.; H. R. Sterrett, New Haven Gas Light Co., New Haven, Conn.; A. A. Sweeney, New England Power Association, Boston, Mass.; Clark Belden, New England Gas Association, Boston, Mass.; J. W. West, Jr., secretary, American Gas Association, New York, N. Y.

The program will be devoted largely to discussion of industrial and domestic gas sales, and interesting papers on this subject will be presented by speakers who are prominent in the industry.

P. U. A. A. Will Meet

AS customary, the annual convention of the Public Utilities Advertising Association will be held this year in conjunction with that of the Advertising Federation of America, which will be held at the Hotel Pennsylvania, New York City, June 17 to 20, inclusive.

Sessions of the P. U. A. A. will be held Tuesday, June 19, and may continue into the following day.

An important feature of the P. U. A. A. meeting will be the announcement of the prize winners in the "Better Copy Contest."

Sales Experiences

Facts—Data—Comparative Fuel Costs, but These Alone Would Never Sell Industrial Gas

Out of Tune

Organ Out of Tune This Sunday. Suppose a sign like this had to be posted on the church bulletin board every time the weather changed? That is really what happens, as it changes the length of organ pipes and the air blown through them.

All too few people appreciate the necessity for keeping an organ properly heated and for keeping the air at the right temperature. The greatest organist would sound like a rank amateur if temperatures were not right. Vibration and pitch could not be maintained and an organ out of tune sounds like a steam calliope when the circus comes to town in spring.

C. W. Gale, superintendent of the industrial gas division of the Public Service Company of Colorado, reports this interesting sales experience at St. John's Evangelical Church in Denver, Colorado. They might have needed a sign on the bulletin board except for his successful installation of thermostatically controlled warm air heating furnaces. The church now has three gas-fired warm air circulators, with fans thermostatically controlled by zones to give uniform temperature, thus keeping the organ ready for immediate use at any time.

This kind of an installation does not burn a great deal of gas, as only 72 cubic feet of 830 B.t.u. natural gas are needed per hour, but even though it is small, the business is a most desirable one. Electricity was the competing fuel, but at 5 cents per k.w.h., the gas installation represented a real economy. The rate for gas was 50 cents per MCF.

From Electricity to Gas

Although gas has long held a preeminent position as a fuel for bread baking in traveling ovens, there have been a few electrically operated bake ovens in use in various parts of the country. In the Ward Baking Company's Philadelphia plant a 70-foot traveling oven had been operated by electricity at 1½ cents per k.w.h. quite successfully for some time. The Philadelphia Gas Works Company had often cast longing eyes on this installation, hoping that it might be changed to gas. Possibly a new oven would be needed sometime. Possibly this oven would turn out to be too small. But still it went along merrily as an electric oven.

Finally, as Frank H. Trembly, Jr., reports, negotiations were successfully completed to convert this oven from electricity to gas. Now, that has been done elsewhere also, but the unusual feature of this installation was that it was converted without stopping operation. Piece by piece electric heating elements were removed and gas burners substituted. For weeks this oven was a combination gas and electric oven, but finally the last electric element was removed, and it was now an all-gas oven, using 50 Kemp open flame adjustable burners.

The operating cost with electricity was based on 1½ cents per kilowatt hour, and the gas which was substituted for it was available at an average rate of 72 cents per MCF of 530 B.t.u. gas. Not only did this result in a 50 per cent reduction in the operating cost, but a better heat distribution was obtained throughout the oven, and the operation was considerably more flexible than before.

Effect of N R A

Considerable natural curiosity has prompted many questions on the effect of the N R A on the industrial gas business. From Pittsburgh, D. W. Frye, industrial gas salesman of the Equitable Gas Company, reports this definite situation.

The Columbia Radiator Company of McKeesport have been baking cores for casting radiators with foundry coke, for which they were paying $4.75 per ton. Two years ago a comparative test was run between gas and coke, and although there was a slight advantage in favor of gas on the basis of straight fuel comparisons, the Columbia Radiator Company did not feel that the installation would be justified, because it would take too long for the savings to pay for the cost of the new equipment. So coke continued to be burned until, under a provision of the N R A code, the company was forced to buy its coke from another source. This slight change caused an increase in the freight rate, which definitely made gas attractive.

Consequently, the Coalmen insulated brick ovens, arranged in batteries of four, were converted as rapidly as possible to gas firing. Originally, one coke furnace with distributing flues heated each battery of four ovens. Gas burning was arranged so that each oven would have its own burners, obtaining better uniformity in baking.

Under the old system fires had always given trouble at the beginning of the week, as they were hard to start. Eight hours of firing were required before coke core baking could begin, and even then it was difficult to control the oven temperatures. As a result of this lack of control, core breakage amounted to 13 per cent. Furthermore, there was a tendency of the cores near the top to bake first, and it was necessary to remove these and replace them with fresh cores from time to time. The change to gas burning reduced this core breakage from 13 to 3 per cent. The savings effected by this change and the reduction in the labor required were equal in value to the entire cost of gas.

For those who are technically minded, it may be said that the gas equipment consisted of low-pressure air, supplying proportional air-gas mixers, providing gas for steel blast tips set into two manifolds that lie along each side of each oven and fire horizontally inward. Natural gas, 1130 B.t.u., is burned with a maximum hourly consumption of 4 million B.t.u. The rate earned by this company is 42 cents per MCF.

Cuts Cost in Half

Now that gas has replaced electricity in this industrial brush drying installation, the cost of operation has been cut approximately in half. This, however, was not the only advantage which gas offered. The moisture given off by the burning gas materially improved the brushes, as this company had formerly been troubled with a dry atmosphere caused by electric radiant heating. The

(Continued on page 179)

ACCOUNTING SECTION

E. B. NUTT, Chairman — H. W. HARTMAN, Secretary — A. S. CORSON, Vice-Chairman

Method of Control for Consumers' Deposits

By W. J. FOY

Consolidated Gas Company of New York

THE success of any plan for controlling consumers' deposits lies in the safeguards surrounding it. Whether it be accomplished through the use of mechanical equipment, or by means of a longhand method, is a matter of choice.

In adopting the system in use by the Consolidated Gas Company of New York, which includes the use of punch card equipment, primary consideration was given to the development of proper safeguards of all the intermediate steps relating to the issuing and refunding of consumers' deposits. To minimize the possibility of collusion, a plan was inaugurated whereby the clerical details incident to deposits issues or refunded require the attention of three separate divisions of the company, namely, the Commercial Department, the Accounting Department (General Office Control Bureau), and the Tabulating Department. Briefly, the functions of these departments are as follows:

Commercial Department. Deposits are issued through the various business offices. Likewise, the refunding of deposits results from the preparation of daily reports by the Commercial Department, which are forwarded to the General Office Accounting Department.

Accounting Department (General Office Control Bureau). Acts as a clearing source for the receipt of data from the Commercial Department and, after insuring the fact that the information has been properly reported, transmits same to the Tabulating Department, for the purpose of recording the necessary information on the punch card.

Tabulating Department. The punching and tabulating of records is performed as a daily routine of this department. These results are compared and checked both as to detail and total by the General Office Control Bureau with the initial listings prepared by the Commercial Department.

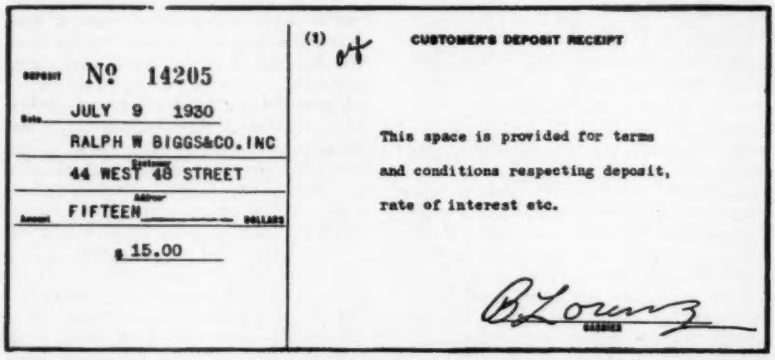
Deposit Issues

When a consumer pays a deposit, three copies of a receipt are issued; the original or number one is given to the consumer, the duplicate or number two is made on a tabulating punch card for the General Office Control Bureau, and the triplicate or number three is retained in the Commercial office file.

The number two tabulating cards are listed by the Commercial Department in numerical order on summary sheets showing name, address, amount, and deposit receipt number, and forwarded daily to the General Office Control Bureau. At this point they are checked as to number, particular stress being laid on the fact that all numbers must be accounted for and run consecutively. The amounts are checked and the cards forwarded to the Tabulating Department where they are punched on a key punch machine.

A special code is used to indicate the year and month that deposits are issued, refunded or adjusted. The cards are then run through a tabulating machine and the total checked with the amount shown on the summary sheet. When the cards are returned by the Tabulating Department to the General Office Control Bureau, they are rechecked to verify the fact that all cards have been returned. The cards are then filed numerically in active files.

At the end of the month, the Tabulating Department, having previously punched the daily total on a master card, advises the General Office Control Bureau of the accumulated total for the month. This amount is then checked with the cash report of the Commercial Department preparatory to the recording of the amount in the books of account.



DEPOSIT No 14205
Date JULY 9 1930
RALPH W BIGGS&CO. INC
Customer
44 WEST 48 STREET
Address
Amount FIFTEEN DOLLARS
$ 15.00

(1) of CUSTOMER'S DEPOSIT RECEIPT

This space is provided for terms and conditions respecting deposit, rate of interest etc.

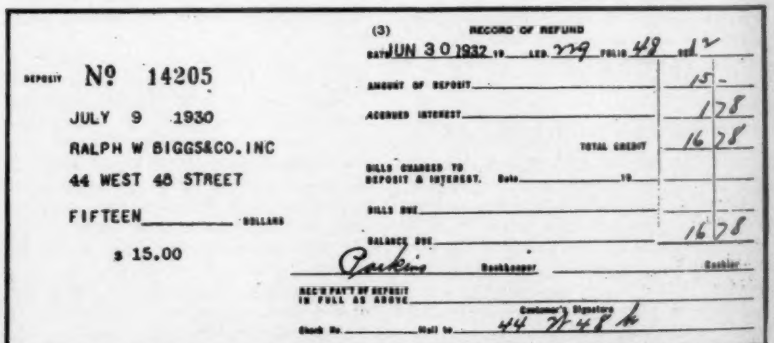
Cashier

Deposit Receipt

Deposit Refunds

Cash refunds are made from petty cash funds at various business offices for deposits of less than $25 in instances where an original receipt is presented, properly endorsed and upon suitable identification. All other refunds are made by check issued from the General Office.

If original receipt has been lost or in the event that the refund is automatic—as in the case when an account goes final, check being sent to last known address—



DEPOSIT No 14205
JULY 9 1930
RALPH W BIGGS&CO. INC
44 WEST 48 STREET
FIFTEEN DOLLARS
$ 15.00

(3) RECORD OF REFUND
DATE JUN 30 1932 19 LED. 719 FOLIO 48 REF. 1
AMOUNT OF DEPOSIT 15-
ACCRUED INTEREST 1 78
TOTAL CREDIT 16 78
BILLS CHARGED TO DEPOSIT & INTEREST. Date 19
BILLS DUE
BALANCE DUE 16 78
Parkins Bookkeeper Cashier
REC'D PART OF DEPOSIT IN FULL AS ABOVE
Customer's Signature
Check No. Mail to 44 W 48 St

Refund Record

(2) CUSTOMER'S DEPOSIT RECORD

DEPOSIT NO. 14205

JULY 9 1930

RALPH W BIGGS&CO. INC

44 WEST 48 STREET

FIFTEEN_____ DOLLARS

$ 15.00

2207

CONSOLIDATED GAS COMPANY OF N. Y.

Deposit Record

deposit is refunded by check and mailed. Refunds are listed on summary sheets and forwarded daily to the General Office Control Bureau where they are checked as to amount of deposit, interest, bills deducted, name, address, and totals. When a refund is made by cash the summary sheet must be accompanied by the endorsed original deposit receipt, and the number three copy which has been on file in the Commercial Department. If refund is to be made by check, the number one and number three copies are forwarded with the summary sheet, but if the original receipt is not available, refund is made on the number three copy alone; no affidavit being required by the company.

The summary sheets are then sent to the Tabulating Department with the card —the number two copy—on which is punched the date of refund, interest, unpaid accounts, if any, and the amount refunded. A tabulation is then made of the amounts refunded as shown on the punch cards, which is checked with the totals on the summary sheets. After refund cards are returned by the Tabulating Department to the General Office Control Bureau, they are checked to verify that all cards have been returned and then filed in a separate compartment until the end of the month.

At the end of each month the Tabulating Department advises of the accumulated total of refunds made during the period, which total is checked with the ledger record, after which the cards are filed numerically in the permanent "Refunded" file.

Balancing

Four times each year all cards in the "active" files are tabulated. The Tabulating Department, operating independently and without a predetermined total to reconcile their results with, advises the Accounting Department and the reported total is checked with the ledger balance.

The procedure as outlined has been in operation for over three years and the results to date indicate that the additional expense incurred through the installation of this system has been offset by other compensating factors.

The fact that the underlying detailed records of the active deposit accounts are in continual balance with the general books, and that proper protection has been placed around the deposit procedure, thereby reducing the possibility of manipulation to a minimum, are the two major reasons warranting the continuation of the control system now in operation.

Dries Air or Gas by Adsorption

TO supply air or gases with a humidity content much below the normal, a new industrial instrument that has been given the test of use is announced by the Pittsburgh Lectrodryer Corp., Pittsburgh. The device is known as the Lectrodryer. It employs the principle of adsorption, or adhesion of the molecules of gases or dissolved substances to the surface of a solid body. Considerable research work in developing this method of applying gas to drying has been done by the Committee on Industrial Gas Research. For the solid body this company uses what is known as activated alumina, a recent development of the Aluminum Co. of America.

The field of use of the dryer is that broadening one in many chemical and technological processes in which refinement and dependability of product call for utmost control to prevent irregularities growing out of variable weather conditions. It has been applied, for example, in connection with the controlled atmosphere procedure of bright annealing and for preventing precipitation of moisture in storage rooms.

The Lectrodryer may be described as a small tower for connection directly to an air or gas line and provides for the continuous delivery of dried air or gas. The towers are built in single or double units, one adsorbing while the other is undergoing reactivation. The shift of a lever once or twice a day serves to cut the adsorbers in and out of service. For reactivation, dryers are rated for 500, 2500, 6000 and 10,000 cu.ft. of air or gas per hour.

Dryness that is equivalent to dew points of 50 to 60° C. below freezing (—58 to —76° F.) are claimed to be regularly obtained in commercial installations. It also is said that lower dew points are attainable. While the equipment is employed essentially for dehumidification, arrangement may be made for temperature control of the gas dried. The dryer is also designed for operation at high pressures, say, 125 lb. per sq.in.

Study on Depreciation

DEPRECIATION—A Review of Legal and Accounting Problems," is a comprehensive study of one of the most pressing questions in the utilities field. It was prepared at the request of the National Association of Railroad and Utilities Commissioners by the staff of the Wisconsin Public Service Commission.

Because it has been found that much of the controversy and confusion in this subject arise from attaching different meanings to depreciation, early in this book the Wisconsin Commission's understanding of the term is explained, for this is the premise upon which its views of an ultimate depreciation policy rest.

Study for the most part has been restricted to cases before the Federal courts.

The book is published by the State Law Reporting Company, New York, N. Y., and covers 200 pages. Price, $1.85 (cloth), plus postage.

COMMERCIAL SECTION

N. T. SELLMAN, Chairman J. W. WEST, Jr., Secretary F. M. ROSENKRANS, Vice-Chairman

Planning for House Heating Sales

By HENRY O. LOEBELL*

Natural Gas Pipe Line Co. of America

Henry O. Loebell

THE problem of expending sales is one which is confronting practically every gas company in the country. No field offers a greater opportunity for expansion than the house heating field.

There are few companies which cannot profitably increase their house heating sales to some extent. There are, of course, limits to economic expansion but few companies have reached a saturation which entirely precludes further sales.

In this day when competition is severe and expenses must be held to a minimum, the problems confronting sales executives are not readily solved. Yet it is frequently possible to discover a feasible course of action by employing the elements which comprise scientific salesmanship in one comprehensive plan.

Scientific salesmanship or planning is not anything particularly new or mysterious. Planning merely means keen analysis of the markets and conditions essential to sales success. It differs from ordinary sales methods in that the problems and objectives of a planned sales campaign are known in advance. It differs from the "cut and try" methods generally employed by determining the probable results in advance with a fair degree of accuracy.

The success of a planned sales effort is dependent upon the studies made prior to taking action. Because these studies sometimes appear to be complicated and foreign to the subject, they are frequently discounted and rejected by executives unfamiliar with the results which can be produced. In their place is substituted the age-old policy of reducing rates in order to secure business by the sheer weight of lowered cost. During periods when competition is not as severe as it is at present, this latter method has produced satisfactory results. It will continue to produce increased sales even at the present time, but it never has and it never can produce the maximum amount of profit possible because it fails to ascertain that goal in advance and hence establishes no standard of measurement.

Today management is concerned with maximum profit at minimum expense. This necessitates complete analysis of potential markets and requires that sales managers employ the most scientific methods available to support their recommendations and policies.

Certain companies have experienced unusual success in developing the house heating field by following a well-defined plan which is applicable to almost any situation.

The Plan

This plan is based upon a detailed analysis of the potential market in order to determine the conditions essential to a successful sale. It is followed up by an intensive educational and sales campaign designed to cover the territory rapidly and present the sales story to every probable purchaser. The plan requires the complete cooperation of every department of the company and for this reason it is of interest to the executive as well as to the sales branch of the industry.

The Initial Survey

In developing the plan it is assumed that every user of heat is a potential prospect for gas until proven otherwise. Consequently the first step is to find out the number of people using heat in any form. This information can generally be obtained from local chambers of commerce, realty boards, etc. It will show the number of single family residences, two family flats, apartments, etc., together with the percentage of occupancy.

The number of occupied buildings will be the maximum potential market.

Obviously, however, not all of these people will purchase gas. Some of them will be connected with the coal business. Others will be oil burner salesmen, manufacturers, or distributors of fuel oil. Still others will have fixed prejudices against gas which cannot be overcome.

After eliminating this class of people there will remain a large majority with various incomes which represent the ultimate potential market. Some of these people will be wealthy enough to spend any amount of money for the advantages of gas heat if they are convinced of its value. Others will be unable to spend no more for gas heat than they now spend for coal regardless of the advantages which gas may possess. Between these two groups will lie the great mass of people who can spend something extra for gas heat if they are sold on the value of the additional expense.

It is obvious that the volume of sales which can be secured from this group will be dependent upon the additional cost of gas heat. Furthermore, this cost must be broken down into equipment cost and gas cost.

While many people might accept the increased cost of the gas itself, they would not be able to purchase the equipment essential to its use. Hence, it is necessary to consider the cost of the equipment as a part of the cost of gas heat and determine the market potentials accordingly.

Under such circumstances, it is apparent that a payment plan on the equipment reduces the "out-of-pocket" expenditure and permits the acquisition of a larger number of customers. Moreover, it relieves the prospect from making a definite capital outlay which in itself is a formidable barrier at the present time.

For this reason a payment plan on equipment within the reach of this portion of the public is suggested as the best method of securing volume under present day conditions.

The immediate problem is to determine the number of people who do have surplus income together with the amount of the surplus.

This information can be obtained by a study of income tax returns, living costs and various other government statistics when combined with an actual cross section survey of portions of the community. It is obvious that this is not a task which can be readily undertaken by any one. While the necessary statistics are generally available their interpretation should be left to a skilled market analyst who has had experience in studying the house heating market.

This is especially true because the consumer survey should attempt to uncover the opinions held by the public with respect to gas heat, the standing of the gas company, and the resistances which will be met in a house heating campaign. Obviously no company could expect to secure an impartial survey of such facts with its own personnel which is an added reason for employing competent marketing counsel for this portion of the work.

A thorough analysis of the market will result in a summary which will show the annual premium which various numbers of

* The House Heating & Cooling Committee of the American Gas Association is sponsoring a series of articles that will cover all phases of house heating and cooling by gas. This is the first of the series and is presented by the Sub-Committee on Load Building Plans, of which Mr. Loebell is chairman. Subsequent treatises will cover installation and maintenance, controls and their application, retention of present customers, winter air conditioning, summer air conditioning, heat conservation, individual apartment heating, advertising, competitive fuels, relative cost, and commercial unit heaters.

people will pay for gas heat over and above the present cost of coal. This summary will have the following general appearance:

No. of Heated Residential Buildings in City	2,200
No. of Buildings occupied	2,100
No. of Buildings Eliminated by Conflicting Interests of Tenants	100
No. of Potential Prospects when gas costs no more than coal	2,000
No. of Potential Prospects when gas costs $10 per year more than coal	1,000
No. of Potential Prospects when gas costs $20 per year more than coal	600
No. of Potential Prospects when gas costs $30 per year more than coal	450
No. of Potential Prospects when gas costs $40 per year more than coal	320
No. of Potential Prospects when gas costs $50 per year more than coal	200
No. of Potential Prospects when gas costs $60 per year more than coal	140
No. of Potential Prospects when gas costs $70 per year more than coal	80
No. of Potential Prospects when gas costs $80 per year more than coal	60
No. of Potential Prospects when gas costs $90 per year more than coal	40
No. of Potential Prospects when gas costs $100 per year more than coal	20

The Rate

Upon obtaining the foregoing data, it is possible to compute the house heating rate. The cost which people will pay for gas for house heating will be the cost of their present fuel plus the annual premium required for gas heat.

It is obvious that all of the people of a community will not heat with the same grade of fuel nor will they use the same volume. The largest homes in a city are generally occupied by the wealthiest citizens. Strangely enough these are not the best prospects for gas heat because the task of firing a furnace is generally done by a servant. The best prospects for automatic gas heat are the middle class citizens who have some surplus income but who also take care of part of the household duties.

The well-to-do people in this classification will perhaps use anthracite coal, coke or oil. As the potential market increases the gas competition will be found in the cheaper grades of coal.

It is therefore essential to analyze the fuel competition and determine the number of people who use anthracite coal, coke, oil and the various grades of coal. It is also necessary to determine the quantity of fuel used by the average resident.

From these data it will be possible to compute the average cost of fuel used per season and the quantity of gas necessary to displace the existing fuel. It will be found that the volume of gas required for the average resident who uses hard coal, coke or oil will be larger than that required for the average resident who uses hard coal. This is due to the fact described above that the users of the better grade fuels generally live in the larger homes. In making this calculation, little dependence should be placed in laboratory tests on furnace efficiencies. Laboratory tests reveal that gas should be burned with an efficiency of 80%, oil 75%, and coal 60% to 65% in an ordinary furnace. In actual practice, however, the efficiency of gas will be closer to 70%, oil 60%, and coal 45% to 50%.

To the cost of the existing fuel must be added the annual premium which the prospect will pay for gas heat. This total cost divided by the volume of gas necessary to displace the existing fuel will give the unit rate per M cu.ft. which will be paid for gas.

As a result of this calculation, it will be possible to prepare a table showing the number of customers which can be obtained at various rates for gas and the volume of gas which can be sold at these various rates.

This is about as far as the sales department can go unaided.

Costs and Expenses

The sales executive should now turn these data over to the operating department and request the incremental cost of various volumes of additional gas, the new investment required to serve additional house heating customers, and the cost of serving such additional customers.

In compiling these cost estimates, care should be taken to include only those costs which increase purely because of the added load. It is recognized that all business should carry its proportionate share of overhead costs. However, new business which yields a margin of profit in excess of its actual "out-of-pocket" cost is always desirable business and hence this expense estimate should be confined to incremental costs alone.

Determining the Sales Objectives

Upon receipt of this information, the sales department will be able to compute the combination of new customers, rate and expense which yields the maximum profit without reference to sales expense. While this number of customers may not be the most desirable when sales expense is included, it will probably be close enough for initial consideration.

The Sales Resistances

At this point consideration should be given to the sales resistances which will have been determined by the original survey. As the resistance of cost has been met by the calculated rate, the only remaining economic barrier will be the cost of the equipment.

This is a major obstacle to sales volume at the present time. The public is not in a mood to make definite commitments for household appliances requiring a large cash outlay. They are, however, agreeable to accepting any labor-saving device which can be paid for on small monthly payments and resistance disappears completely when the equipment is offered on a rental basis which permits cancellation and removal at the customer's option. This plan does require the investment of considerable capital in equipment. However, the rental charge can easily be sufficient to cover the interest and amortization of this sum, including an amount adequate to cover the losses on removals.

With the rate established at a level to permit the connection of the desired number of jobs and with the equipment problem solved by a rental plan, the task is reduced to the advertising and sales technique.

The methods employed to obtain sales will depend upon the ultimate goal. If the objective is sufficient to warrant large scale sales efforts, a mass selling campaign should be considered. If, however, the number of jobs to be secured is small, individualized selling efforts will be required. In either case the selling principles will be identical but the methods employed will of necessity differ.

Advertising for Mass Sales Campaigns

Advertising in itself seldom produces sales. Advertising is the artillery which destroys the barriers to sales. Advertising is effective in direct proportion to the number of times its message reaches the prospect. This means that a sound advertising campaign must be unrelenting in its attack and must never give the prospect an opportunity to escape its effect.

In order to accomplish such results every medium of advertising should be employed. Newspapers should be used to attract attention as the prospect leisurely reads. Billboards are utilized to hurl a quick message as he walks or rides throughout the city. The radio catches him as he sits in his home. Direct mail secures his immediate individual attention.

In planning the advertising campaign, careful thought must be given to the results which are to be accomplished. To those who are familiar with the facts, gas is superior to all other fuels as a means of heating the home. If this opinion were universally held, there would be no problem in selling gas. It is because this opinion is not universally held that there is a sales problem in connection with developing this market.

Yet mere concentration on the advantages of automatic gas heat will not be sufficient to gain wide public acceptance. For generations people have tolerated an inferior heating service because they have experienced nothing better. The suggestion that gas be used in place of coal or oil necessitates a change. And human nature automatically rebels at the thought of a change. The natural inclination is always to resist change.

For this reason the advertising must be designed to effect a transition from negative indifference to positive acceptance.

The first step in such a campaign is to create dissatisfaction with the existing heating service. The tiresome trips to the basement, the endless shoveling of coal and removing of ashes are matter of course incidents in the average prospect's life. They are the result of habit and as such they are not resented. The fact that they are burdens and that they are unnecessary must be pointed out to the public. This phase of the advertising must establish the inferiority and inadequacy of existing heating methods.

The second step of the campaign should correct the errors and misconceptions commonly held by the public. Practically every person will express an opinion upon gas heat. Investigation will reveal that such opinions have little foundation in fact and are generally traceable to rumors or gossip. Yet the objective contained in these opinions are real from the prospect's viewpoint and must be met. This phase of the campaign should take up these misconceptions and correct them carefully and logically.

The third phase of the campaign should create a desire for automatic gas heat. Having created dissatisfaction with the existing heating service in the first phase of the campaign it becomes necessary to give the public something which can replace it. This phase of the campaign will stress the advantages of gas and contrast them with the deficiencies of their present equipment.

The fourth step should establish the economic value of the gas. While salesmanship can connect jobs to the line, they will remain in service only when the customer is convinced that he is receiving value for his money. It makes no difference whether gas costs $10 or $60 more per year than coal. The premium, whatever it is, should be built up step by step with a dollar and cents value placed upon every discomfort which gas eliminates and upon every comfort which it adds. This step is of paramount importance in establishing the fact that the cost of coal heat is the cost of coal plus certain additional costs, while the cost of gas heat is the cost of gas alone.

The fifth step in the advertising can well consist of testimonials showing the class of people who are purchasing automatic gas heat and the degree of satisfaction they are obtaining. Advertising of this nature is extremely valuable in combatting the popular opinion that gas is expensive and beyond the means of the average family.

The Sales Procedure

The success of the sales campaign will in the final analysis rest upon the ability of the sales force. Regardless of the merit of the advertising campaign, the actual orders must be obtained by the salesmen.

It is possible to train a sales organization and then let the men exercise their own initiative. This method, however, will never produce the results which a completely organized and synchronized method will produce.

Salesmen should be assigned definite territories which they should canvass systematically and arrange for definite appointments. The purchase of automatic gas heat is a major purchase with the average family and as such the presentation should be made to the husband and wife together. The presentation should be planned in advance and supported by a visual presentation which holds the prospect's interests and serves as a guide to a logical sequence in presenting the sales points.

Every aid should be extended the salesman and all red tape eliminated from his work. Forms, reports and clerical work should be reduced to a minimum and the salesman should not be burdened with collection work nor complaints.

The most important thing to impress upon the salesmen is the necessity for proper selection of prospects. The salesman's natural tendency is to consider a prospect to be a person who has the means to pay for gas heat. It is the salesman's job to interest such a person in gas heat and the salesman is evading the issue by confining his presentations to those people who express an interest.

It is impossible for the sales executive to give too much attention to the salesmen's efforts and results. Careful sales analyses should be made constantly and new ideas injected into the sales methods continually in order to maintain interest and enthusiasm.

The number of salesmen employed should be great enough to permit rapid coverage of the territory and give assurance that each potential customer has had an opportunity to learn about the proposal while the advertising is still fresh.

Economics of the Sales Campaign

It is obvious that the advertising expense, salaries and overhead of such a campaign will require a considerable sum of money. This will be a fixed expense regardless of the number of jobs sold.

To this fixed expense will have to be added the cost of the equipment and its installation and the commissions paid salesmen and executives. These latter expenses will vary with the number of jobs sold.

The sales price of the burner even on a rental basis will produce some profit over and above its cost and installation charge. Seldom, however, will this profit be sufficient to cover all of the fixed and variable expense.

The total deficit from the campaign should be divided by the number of jobs which will be sold to ascertain the unit sales cost. Business judgment will then dictate whether or not the expenditure is warranted.

Cooperation

The importance of complete cooperation cannot be too strongly emphasized. The sales department can secure jobs, but it cannot hold them. Automatic gas heat is sold at a premium on the idea that it relieves the customer from all worries in connection with his heating problem. This relief must be extended from the time the sale is made.

The installation of the burner should be made with a minimum of delay and disturbance to the customer. Service calls should be answered promptly and service rendered efficiently. Bills should be submitted correctly and on the proper rate. These are essential elements to the success of the sale. Yet they are all beyond the control of the sales department.

Because of this fact the sales manager should insist upon an executive conference prior to the start of the campaign and secure the endorsement of every department head as a requisite to the inauguration of the campaign. Failure to secure this endorsement may easily result in complete failure which in no way can be attributed to the sales department.

Dealer Cooperation

A plan of dealer cooperation should be included in the campaign. Dealers should be given unlimited territory and few restrictions imposed upon them. Obviously they should be required to sell approved equipment only and their estimates and installations should be subject to company approval.

With an acceptance of these conditions, however, dealers should be permitted to sell on company terms with the company accepting their indorsed paper just as is done with jobs sold directly. Moreover, a liberal scale of compensation should be provided so that dealers will be encouraged to employ their own salesmen and support the campaign in every possible manner.

The Individual Campaign

The sales campaign which is to be conducted by individualized selling will not differ from the mass sales campaign in fundamental principles.

However, it must of necessity be conducted by house to house canvass with little advertising support. Its success rests entirely with the salesmen and the results will obviously be realized slowly.

Conclusions

In conclusion it can be said that the results of a planned sales campaign will be only as accurate as the original studies upon which it is based. Proper interpretation of the necessary data is essential to success.

However, when the projections have been soundly conceived, proper sales organization should produce the estimated results and the value of planning should be definitely established.

"Gas Saver" Facts For Employees

Fitters, repairmen, shopmen and other employees engaged in appliance servicing work will be particularly interested in Information Service No. 115, entitled, "What Are the Facts about Gas Savers?"

This publication is an authoritative expose of all so-called gas savers, based on two exhaustive investigations conducted independently by the United States Bureau of Standards and the American Gas Association Testing Laboratory. Illustrations show the forty-two known kinds of "savers" most frequently offered for sale.

Sample copies may be had upon request. Quantity lots are available at $1.50 a hundred copies. Address American Gas Association, 420 Lexington Avenue, New York, N. Y.

Mr. Blanchfield Made Asst. Vice-President

John I. Blanchfield

J. I. BLANCHFIELD, statistician, has been elected assistant vice-president of The Brooklyn Union Gas Company, Brooklyn, N. Y.

Mr. Blanchfield, who is widely recognized as an authority on utility rate-making was born and educated in Brooklyn. He entered the Brooklyn Union's employ in 1919 as an appraisal accountant. In February of the following year he was appointed assistant auditor and in 1927 was made statistician.

Prior to his affiliation with this company, he was employed by the Kings County Lighting Company. He began work for that company in 1906, first in a clerical capacity, but eventually becoming assistant secretary and auditor.

Mr. Blanchfield has long been active in the American Gas Association. He was a pioneer member of the Managing Committee of the Accounting Section, having served as its chairman.

He has been for a number of years a member of the Rate Structure Committee of the A. G. A. and also served as a member of the Managing Committee of the Accounting Section of the Empire State Gas and Electric Association.

Dr. Willard Elected University President

DR. ARTHUR C. WILLARD, professor of heating and ventilating and acting dean of the institution's College of Engineering, has been elevated to the presidency of the University of Illinois. He succeeds Harry W. Chase, who resigned from Illinois to become chancellor of New York University. Dr. Willard will be installed July 1.

Dr. Willard for years has been one of the country's leading authorities on heating and ventilating subjects. He has for some time been consultant on research matters of the American Society of Heating & Ventilating Engineers. Most of the air conditioning research of the society has been conducted at the University of Illinois, where the American Gas Association Committee on Industrial Gas Research has cooperated during the last three years in a technical study of the relation of refrigeration to air conditioning.

The University of Illinois Medical School has, during the last year, been testing one of the Silica Gel summer air conditioning machines, developed under the A. G. A. Research Committee's auspices, for the purpose of determining the extent to which hay fever and asthma sufferers can expect relief.

Telling the Public Why

SHOULDN'T The Gas Company be supported in adjusting its rates to increased costs — the same as any other business?

The Gas Company cannot exempt itself from the same economic conditions that affect other lines of business. We must meet heavier payrolls and pay considerably more for the many materials and supplies necessary to maintain gas service. Our ratio of taxes to income has mounted by leaps and bounds. The depression cut a wide swath in our income, both in the number of customers and amount of gas used per customer.

Can a static rate meet these changes? Can a lower rate meet increased costs? What kind of arithmetic will make a subtraction process equal a result in addition? Other lines of business are cheered as they face the true economic picture and raise prices to meet these conditions. Can it be said, then, that The Gas Company is penalizing any of its customers if it adjusts rates to make its income balance with expense?

The mixed gas proposal which has been submitted for Toledo allows the customer a greater saving on the use of gas than he pays for it, compared to the cost of other fuels for general household purposes. True, the rate is higher than most of our customers have been paying, but further increased costs would prohibit our offering a rate this favorable at a later date.

Doesn't it seem more logical to believe that a lower rate can be negotiated now than will be possible when prices go still higher?

C. W. Wallace

C. W. Wallace, Vice-Pres. and Gen. Mgr.
Northwestern Ohio Natural Gas Co.

Gas Doesn't Cost . . . *It PAYS!*

Display advertisement of the Northwestern Ohio Natural Gas Company in the "Toledo (Ohio) Blade," April 17, 1934

HOME SERVICE COMMITTEE

DOROTHY E. SHANK, Chairman — JESSIE McQUEEN, Secretary

150 Attend Home Service Conference

MEN and women interested in home service made up an attendance of 150 at a two-day conference held in Chicago, April 13 and 14. Home service directors, sales managers, home economics editors of magazines and newspapers, home economics directors of food and equipment companies, instructors of equipment in colleges, supervisors of home economics teachers, extension agents, manufacturers' representatives, merchandise counsellors and utility executives composed a diversified audience.

This conference was sponsored by the Home Service Committee of the American Gas Association. Its chairman, Dorothy E. Shank, director research kitchen, American Stove Company, Cleveland, Ohio, presided at the various sessions and was actively in charge, assisted by Jessie McQueen, home service counsellor, American Gas Association.

The opening session was devoted to discussions of kitchen planning. A kitchen modernization résumé was developed by R. J. Rutherford, assistant to vice-president, New England Gas & Electric Association, Cambridge, Massachusetts. He not only pointed out the advantage to gas companies of carrying on this project, but developed a comprehensive outline as to its organization and development.

Methods by which this work is carried on in utility companies were presented by three home service directors—Margaret Nevins, Niagara Hudson Power Corporation, Syracuse, New York; Beatrice Wagner, Philadelphia Gas Works Company, Philadelphia, Pa., and Albertine Berry, Lone Star Gas Company, Dallas, Texas.

An interesting exhibit of kitchen-planning material in use by gas companies was available for examination by those present. The exhibit was presented to the group by Ada Bessie Swann, Public Service Electric & Gas Company, Newark, New Jersey.

Accessories to kitchen planning, decoration, wall and floor coverings was a subject which brought a wealth of information to those engaged in home service work. Mrs. Florence LaGanke Harris in charge of women's activities in the "Home in the Sky" of the Building Art's Exhibit, Inc., in Cleveland, Ohio, illustrated her subject with a display of materials, charts and illustrations, showing the diversified uses of each, their costs and application. Beautiful materials, exquisite color combinations, smartness in design, all made kitchen planning a fascinating project to carry on, the speaker said.

"Home Service Methods—Are They Meeting Company and Community Needs?" were discussed in another full session. Since home service work can be covered under four topics, which are the subjects of the four booklets constituting the A.G.A. Home Service Manual, these were the divisions under which the talks were presented: Aims, Organization and Publicity, Inside Activities, Outside Activities and Home Calls.

Home Call Playlets

Elizabeth Sweeney, Empire Gas & Electric Company, Geneva, New York, discussed from her own experience the subject of "Aims, Organization and Publicity." Under "Inside Activities" three phases of work were considered as follows: Lecture Demonstrations,—Margaret Nevins, Niagara Hudson Power Corporation, Syracuse, New York; Radio Work—Laura Judd Bryant, Union Gas & Electric Company, Cincinnati, Ohio; and Individual Cookery Classes—Ruth Kruger, Bronx Gas & Electric Company, New York, N. Y. Copies of these papers are available at A.G.A. Headquarters.

By "Outside Activities" is meant the work that is carried on outside company quarters. Subdivisions of this subject were discussed as follows: "Outside Groups, Stores, Clubs"—Karen Fladoes, Equitable Gas Company, Pittsburgh, Pa.; "Community Canning Campaigns"—Zella Paterson, Wisconsin Public Service Corporation, Green Bay, Wisconsin; "Our Work in Chicago"—Mrs. Anna J. Peterson, The Peoples Gas Light & Coke Company, Chicago, Illinois.

"Home Calls," the most generally accepted activity by all home service departments, was presented by four 20-minute "skits" describing the different types of home calls—the follow-up call, the survey call, the complaint call, and the new-gas-customer call. These sketches were presented by nine members of the home service department of the Milwaukee Gas Light Company, Milwaukee, Wisconsin. Prior to the presentation of each skit, Mrs. Ella Lambert, home service director, presented the use made of each call in customers' homes. The members of the home service department presented their dialogue in costume, each playlet typifying the home service girl making a call on a housewife.

"College Training for Home Service" was the subject most interestingly presented by Olga P. Brucher, assistant professor of home economics, Cornell University, Ithaca, New York. Miss Brucher developed the plan now under way in Cornell of presenting to graduating students a course in business methods and studies of the operation of home economics departments in business concerns.

Following Mrs. Brucher's expressed hope that some plan might be worked out by business concerns to give practical training to students similar to that now in use by hospitals for training dieticians, an open forum resulted, participated in by representatives of many business concerns. Among those entering into the discussion were Mary Barber, Kellogg Company; Helen Robertson, *Cleveland Plain Dealer*; Dorothy de Berard, Swift & Company; Doctor Lillian Storms, Gerber Products, all of whom indicated a desire to assist home economics graduates in acquiring experience when a uniform plan could be worked out. Dr. Louise Peet, head of the Household Equipment Department of Iowa State College, Ames, Iowa, was in accord with Miss Brucher's presentation and outlined a plan now under way in her department for training students for home service work.

A dinner-meeting at the Palmer House brought to the group several discussions of work allied to home service. Dorothy Shank presided and following a cordial welcome by Mrs. Anna J. Peterson of The Peoples Gas Light & Coke Company, presented Alexander Forward, managing director of the American Gas Association, who in his greetings to the group expressed his pleasure in the growth of home service work. He felt that its progress during the last few years corresponded closely to the same progress in developments of modern gas equipment.

"Will Women Read It" was a subject of a paper by J. R. Pershall, advertising manager of the Public Service Company of Northern Illinois, Chicago, Illinois. Testimonial advertising seemed to be especially effective, Mr. Pershall said. Another conclusion was that women seemed not interested in, or impressed with mechanical details. Simplicity of terms used in the slogans of advertising proved much more effective than a term seemingly eye-catching which the average reader could not so easily understand. Mr. Pershall stated that advertising people to this day are still experimenting with the enigma, "Will Women Read It."

R. B. Harper Speaks

"Telling Mrs. Consumer" was a subject used by Ada Bessie Swann, Public Service Electric & Gas Company, Newark, New Jersey, in outlining how women customers might be informed on the great help and assistance in a community a home service department could be.

The meetings on the closing day were held in the Home Service Auditorium of The Peoples Gas Light & Coke Company. Discussion was opened by an enlightening paper entitled "American Standards" by R. B. Harper, chairman, American Standards Association Sectional Committee, and

A.G.A. Approval Requirements Committee, and vice-president of The Peoples Gas Light & Coke Company, Chicago. Mr. Harper said "To the average citizen of this country, 'American Standard' may have one or another of a large number of different meanings. More probably, it conjures up in his or her mind, several questions. These questions seem to be: What are American Standards? Why do we have them? How are they created? How are they used? and Why are American Standards of interest to the Gas Industry?" A copy of Mr. Harper's paper in which these questions are answered may be obtained from A.G.A. Headquarters.

"What's New in Gas Appliances" was described by H. D. Valentine, new business department, The Peoples Gas Light & Coke Company, Chicago.

"Low Cost Diets—How Home Service Contributes," a paper by Aubyn Chinn, director of health education of the National Dairy Council in Chicago, was a subject of interest to home service people because of its ready adaptability to the many inquiries received by home service people for aid in furnishing assistance to those people who have been forced to limited food incomes. Miss Chinn outlined the extensive cooperation given her by Mrs. Anna J. Peterson in her work in Chicago and distributed not only literature available from the National Dairy Councils but recipes developed by Mrs. Peterson in cooperation with the Federal Relief Commission.

C. R. Phenicie, vice-president in charge of sales, Wisconsin Public Service Corporation, Green Bay, Wisconsin, presented an effective paper on "How Home Service Aids in Sales Promotion," pointing out many ways in which, in his experience, home service had been of great aid to sales oganizations.

The conference closed with a demonstration of household gadgets and kitchen utensils presented by Esther Kimmel, director of home economics of the Herald Tribune Institute, New York, N. Y.

Miss Shank called attention to the place of home service in the activities and program of the annual convention of the American Gas Association to be held in Atlantic City, N. J., in October.

New A. G. A. Member

THE Association welcomes into membership the Penn Electric Switch Co. of Des Moines, Iowa, manufacturers of automatic switches and controls for heating equipment. In addition, this company manufactures a complete line of refrigeration controls, as well as switches for the automatic control of pumps, air compressors and many other devices. The delegate of the company is R. H. Luscombe, manager of the Gas Controls Division.

The company announces that a descriptive booklet is in preparation covering the new Penn system of temperature control, which is claimed to be an outstanding development in the automatic heating field.

Every Feature Presented Before the Eye

Committees of the Commercial Section of the American Gas Association have prepared Five Slide Film Continuities for demonstration purposes.

Here Are the Five New Weapons for Your 1934 Sales Drive

1. **New Air-Cooled Refrigerator**
   The one best general presentation on the 1934 Electrolux. An attractively visualized dual-purpose film that can be used to particular advantage during the "Go-getter" campaign.

2. **Handsome is as Handsome Does**
   Selling the modern Gas range.

3. **A New Deal in Hot Water Service**
   A forceful presentation of the advantages of automatic Gas hot water service.

4. **The New Technique in Kitchen Work**
   The story of kitchen planning and the automatic Gas kitchen.

5. **The Rogers Family Finds a New Comfort**
   Covering the advantages and conveniences of Gas for House Heating.

These films may be used with any standard slide film projector and projected onto any wall or flat surface. Each purchaser of a set will be furnished with a write-up on how best to use them.

INDIVIDUAL FILMS, $3.00 EACH **COMPLETE SET OF FIVE, $12.50**

Address

Commercial Section

American Gas Association

420 Lexington Ave., New York, N. Y.

INDUSTRIAL GAS SECTION

F. B. JONES, Chairman C. W. BERGHORN, Secretary J. F. QUINN, Vice-Chairman

Large Volume Water Heating

By RALPH L. MANIER*

THE function of the Large Volume Water Heating Committee, Industrial Section, is to aid the industry to obtain more use of gas for large volume water heating.

By large volume water heating is meant such water heating as is required for use in restaurants, apartment houses, hotels, industrial plants, clubs, laundries, institutions and any large water uses which might require the engineering service of the industrial sales department to insure satisfactory performance and efficient use of gas for the purpose.

The writer offers the following suggestions:

Before one can intelligently plant a program or talk about rates for this class of business, he should become familiar with his present and prospective, potential business and the cost and service performed by competing fuels.

In order to size up the situation, it is suggested that a preliminary survey be made to quickly and approximately learn just how much effort and money should be spent in an attempt to get this load. A survey man should contact, say 10% of the restaurants, picking different types and sizes. The same should be done with other users of large volumes of hot water. In each case he should learn whether they are heating their water with gas, and whether they are getting good service from it. This will give a gauge of the satisfaction of present rates and whether the installations are efficient and adequate. You know it is good policy to keep your present customers sold on gas heating as they are very useful in closing sales and can be a great handicap to sales if dissatisfied. If the service is not satisfactory, make a report and try to have the condition corrected. If service is good but the operating cost is the cause for complaint, just make sure there are no hot water leaks and then jot this down for future reference when you analyze the results of your completed preliminary survey.

If the party is not using gas for water heating, make note of all of the available facts at hand. These should include, if possible, the kind and quantity of fuel used together with unit price, labor chargeable against fuel, service rendered, quantity of hot water used and condition of present heater. The compilation of these figures on the places surveyed will give an indication as to the possible volume of gas that can be sold at different prices.

The next step should be the determination of the most advantageous position of volume sales and price to yield the greatest annual net revenue. In some cases the study may readily show that the loss in existing net revenue with a rate change might be more than can be offset by the new business to be gained. In such a case no change should be made. If the preliminary survey has proven that the existing business is unstable at existing rates, however, there may be no choice but to reduce rates to hold the existing load intact and to add as much more load as such a rate will justify.

Off-Peak Rates

The application of off-peak summer rates in many cases might bring on additional large volume water heating load without loss of existing all year revenue. Where there is a large winter house heating peak, usually gas can be sold to advantage at relatively lower rates to even off the load curve. Some of the gas companies are now using such type of off-peak rate to good advantage but as yet relatively few installations have been added.

If the preliminary survey indicates that the existing large volume gas water heating jobs are unstable and at the same time conditions are not such that relief can be given by rates, considerable can yet be done to stabilize business by rendering the customer service to the extent that he is getting the best possible results with the equipment in use. Such service might be cleaning of external surfaces of heater, cleaning and adjusting burners and checking for excessive draft through heater. A good salesman can show the customer that if he should throw away his good gas equipment it would take so many years or months with the other fuel to pay for the new equipment. During such time many things can happen. Possession is said to be nine points of the law. The customer's natural inertia will tend to keep him on gas if he is given the proper attention. The easiest way to lose him as a customer is to dodge him and let the competitors have his full attention.

Must Fix Selling Policy

If the preliminary survey indicates that a drive should be made to get the large volume water heating load, proper aggressive plans should be set up.

First, comes the company policy of direct selling or co-operative selling. A clear understanding of the ground rules governing the plan should be had with all parties concerned. Should the policy be one of co-operative selling with the trade, it would be well to have each job checked by your engineering department to insure proper size and type of heater for the job at hand.

Second, plans for financing should be arranged. The more attractive the selling terms, in general, the more jobs will be installed. With this thought in mind, some companies might seriously consider a lease purchase plan.

Third, a careful study should be made and a list of approved heaters prepared taking care to see that only well constructed, efficient heaters are on the list.

Fourth, a set of installation specifications should be prepared to keep the work up to a standard and insure satisfactory performance of the heater.

Fifth, an active advertising program should be worked out.

A good way to start the ball rolling would be to put on a water heating show and write all prospective and present customers.

The next step would be to try to sell those jobs which gave indication of quick closing from the preliminary survey. At the same time contact should be made and data recorded on the balance of large volume hot water users who should be attracted by the rates used.

Do not let the prospects get cold. As soon as the survey data indicates a prospect should be sold gas, go and sell him. In some cases it will be necessary to make estimates. The A. G. A. book "Water Heating" will be found very useful for this purpose. If actual data is known of the amount of hot water used per day, week or month, the engineer should be able to arrive at a fair anticipation of the amount of gas required to do the job.

Last year's Large Volume Water Heating Committee sent out questionnaires to learn what efforts were being made to sell gas for large volume water heating. In general, comparatively little effort was being put forth. These questionnaires indicated that the following types of customers were sold gas for large volume water heating with the greatest ease in the order named:—restaurants, clubs and schools, office buildings, industrial plants, hotels and hospitals.

This order might well be followed in directing your own activities.

Certain of the chain stores are using gas for their hot water requirements for cafeteria and rest rooms. These might be followed up first.

If the preliminary survey shows the large volume water heating field can be enjoyed at a fair rate of return, it will be well worth the effort to get it.

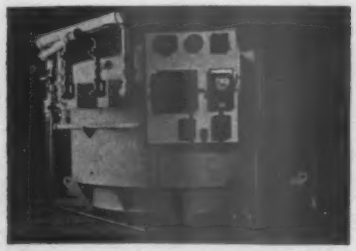
*Chairman, Large Volume Water Heating Committee, Industrial Gas Section.

The preliminary measures described will tend to insure healthy business and the greatest accomplishment for a given amount of effort expended.

The Large Volume Water Heating Committee is continually collecting data on heating of large volumes of water with gas and competing fuels. If you have accurate tests send them in to headquarters. In turn, the Committee will try to give you such assistance as it can.

New Rotary Forging Furnace

THE Gas Machinery Company, Cleveland, Ohio, announces that it has just completed the development of a rotary gas forge with a hearth diameter of 7 ft. and a capacity of 3000 lbs. of steel per hour heated to forging temperatures. The forge has several unique features, among them being that it is entirely self-contained and portable and does not require special foundations, it is exceptionally well protected with insulating fire brick and that it has a water seal and syphon vents. This latter feature is designed so as to permit the accurate control of the



furnace atmosphere surrounding the steel, and the temperature of the steel with a minimum of scaling and decarburization in accordance with the research work which Jominy and Murphy conducted for the Committee on Industrial Gas Research at the University of Michigan.

It is stated that this is not a one-purpose or purely production furnace but is a piece of equipment that practically all forge shops can utilize and keep busy and that it will insure a minimum cost of product with maximum quality.

Arrangements have been made whereby demonstrations can be given to all persons interested in seeing this new rotary forge in operation.

Gas Industry Again Exhibits at 1934 World's Fair

THE gas industry will be present with a new exhibit when the 1934 Century of Progress Exposition opens in Chicago on May 26. The same space that was occupied last year by the industry in Home Planning Hall has been contracted for this year.

In compliance with the Exposition management's wishes last year, all displays emphasized the historical, educational and technical advances of industry. Direct appeals of a commercial character were ruled out. This year it is all different. The gas exhibit will especially emphasize the utilization of gas in modern appliances.

The latest models of all household appliances and equipment will be "starred" in the gas exhibit. These will be portrayed in model kitchens, basements and other suitable settings to complete a well-rounded story of direct appeal to the user and prospective user of gas.

A number of changes have been made in the Exposition's layout this year. The Midway, scene of bright lights and the ballyhoo of the carnival type of amusement, has been moved to Northerly Island. Space formerly given over to the Midway is now utilized by the new German, Tyroleon and other villages, entirely new this year. At other places within the Fair grounds many new features replace the old.

A new structure housing the extensive Ford transportation exhibit —the most important single addition to the Exposition this year—is located about a block away from the Gas Exhibit and is bound to increase attendance at all attractions within that immediate neighborhood. The model homes are still in place and are now being redecorated for the opening date.

With an advance sale of 1,000,000 tickets reported and with statements from the hotel proprietors that advance registrations exceed those of a year ago, the Exposition has again sold itself to the American public.

Public Utilities Study Calendar Reform Proposals

DETAILED studies of current calendar reform proposals are being made by the public utilities, because there seems to be a definite likelihood of some measure for international revision becoming law within the next few years. The new calendar may be one which will bewilder employees, irritate customers and breed a million difficulties and misunderstandings, or it may be one which slides into operation as smoothly as a new blade into a razor. Mere chance or the whim of legislators may determine the choice. Slight pressure of considered opinion, or expressions of preference from those who have seriously studied the matter, could probably control that chance.

The calendar is a schedule. It is the basis of innumerable other schedules. Public utilities, which take no vacations, holidays or days of rest, are bound to the wheel of the year. More than any other industry, they are interested in any proposed change in the method of subdividing that year. Studies thus far made by the utilities indicate that a 13-month calendar would be confusing, expensive and complicating. Inadequate as the existing calendar is, it is probably preferable to a 13-month system. The fault in this proposal obviously is that it would largely increase the inconvenience of present arrangements, and instead of simplifying them, would render them more complex.—J. P. Bowles, Alexander Hamilton Institute, in the Journal of Calendar Reform.

Comes from Roumania To Study Natural Gas Practices in U. S.

EUGENE GUMAN, technical director of the Societatea Nationale de Gaz Metan, Medias, Roumania, is in the United States for the purpose of studying natural gas practices, both industrial and domestic consumption. Before starting on his tour of inspection, which will carry him into the gas fields and several important cities, Mr. Guman called at A. G. A. Headquarters, in New York, April 24, for a conference with Alexander Forward, managing director, and members of the association staff.

Mr. Guman plans to visit Pittsburgh, Pa.; Cleveland, Ohio; Chicago, Ill.; St. Louis, Mo.; Dallas, Fort Worth and Houston, Texas; Shreveport, Monroe and New Orleans, La.

While in Cleveland, Mr. Guman will inspect the A. G. A. Testing Laboratory, in the operation of which he manifests unusual interest.

16th Annual
Convention
and Exhibition

AMERICAN GAS
ASSOCIATION

ATLANTIC CITY, N. J.
Week of October 29, 1934

TECHNICAL SECTION

O. S. HAGERMAN, Chairman — H. W. HARTMAN, Secretary — C. A. HARRISON, Vice-Chairman

Production Conference Opens in New York, May 21

A JOINT Committee Conference of the Production and Chemical Committees will be held at the Hotel New Yorker, New York, N. Y., May 21-22, 1934.

The following tentative program has been developed through a committee composed of J. V. Postles, Philadelphia, Pa.; K. B. Nagler, Chicago, Ill.; E. F. Pohlmann, Chicago, Ill.; and Louis Shnidman, Rochester, N. Y.

*Monday, May 21—10:00 A.M.**

Opening Remarks
J. V. Postles, Chairman,
Gas Production Committee,
Philadelphia, Pa.

Greetings
Alexander Forward, Managing Director,
American Gas Association.

Presentation: Problems Confronting the Gas Engineer
C. E. Paige, Vice-Pres., and Chief Engineer,
Brooklyn Union Gas Co.,
Brooklyn, N. Y.

Report: Water Gas Committee
H. B. Young, Chairman,
The Chicago By-Product Coke Co.,
Chicago, Ill.

Paper: Reformed Natural Gas
H. Wiedenbeck,
The Chicago By-Product Coke Co.,
Chicago, Ill.

2:00 P.M.

Opening Remarks
E. F. Pohlmann, Chairman,
Chemical Committee,
Chicago, Ill.

Report: Committee on New Developments
S. S. Tomkins, Chairman,
Consolidated Gas Company of New York,
New York, N. Y.

Papers: (a) Evaluation of Oils for the Manufacture of Carburetted Water Gas by Their Available Hydrogen Content
(b) A Method of Ultimate Analysis of Organic Substances Developed from Combustion in a Bomb Calorimeter
P. J. Merkus
and
A. H. White,
University of Michigan,
Ann Arbor, Mich.

Paper: Granulated Blast Furnace Slag for Dry Box Purification
R. L. Presbrey,
Boston Consolidated Gas Co.,
Boston, Mass.

Report: Committee on Analyses and Tests
J. F. Anthes, Chairman,
Brooklyn Union Gas Co.,
Brooklyn, N. Y.

Tuesday, May 22—10:00 A.M.

Report: Carbonization and Coke Committee
F. J. Pfluke, Chairman,
Rochester Gas & Electric Corp.,
Rochester, N. Y.

Paper: Material for Dust Treating Coke
H. J. Meredith,
Seaboard By-Product Coke Co.,
Kearny, N. J.

Paper: High B.t.u. Gas as a Standby
H. B. Young,
The Chicago By-Product Coke Co.,
Chicago, Ill.
and
D. M. Workman,
Utilities Power & Light Corp.,
Chicago, Ill.

Paper: Electrostatic Precipitation of Fly-Ash
T. B. Hopper,
Washington Gas Light Co.,
Washington, D. C.

Paper: Hydrogen Balance in Reforming Gases
L. J. Willien,
Byllesby Engineering & Management Corp.,
Chicago, Ill.

2:00 P.M.

Paper: Gum Deposits in Distribution Systems
W. H. Fulweiler,
The United Gas Improvement Co.,
Philadelphia, Pa.

Paper: The Dust Problem
Louis Shnidman,
Rochester Gas & Electric Corp.,
Rochester, N. Y.

Paper: Gas Conditioning with Reference to Hydration and Oil Fogging Practice
H. E. Ferguson,
The Peoples Gas Light & Coke Co.,
Chicago, Ill.

OPEN FORUM

The 1933 Committee Conference proved so successful that the Executive Board again authorized the chairman of the Technical Section, O. S. Hagerman, to issue an invitation to gas company executives to send delegates to the Joint Committee Conference.

Company members that plan to be represented at the 1934 Committee Conference are requested to advise the secretary of the Section, H. W. Hartman, at Headquarters, so that necessary information can be forwarded to their delegates in advance of the meeting.

BINDERS

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AMERICAN GAS ASSOCIATION
420 Lexington Avenue
New York, N. Y.

*Time refers to Eastern Daylight Saving Time.

Distribution Conference in Session at Detroit, Michigan, last month

Distribution Engineers Meet in Detroit

THE outstanding feature of the eleventh annual Distribution Conference, which took place in Detroit, Mich., April 9 and 10, was a change in approach in formulating the program on the basis of a complete review of the various departments of the work from the standpoint of possible and actual economies achieved. To do this the Program Committee selected the various subjects for papers based upon the cost divisions applying to distribution work in the Uniform Classification of Accounts. The keynote for the program selected was possible economies in distribution work without sacrifice of service.

That this plan for building a program was most appropriate for the present time was clearly indicated by the interest and enthusiasm with which the delegates participated in the discussion of all items. A particularly happy departure from custom was an address from Miss Hulda Ungericht, of the Ohio Fuel Gas Co., Columbus, Ohio, on "Satisfying the Customer." Miss Ungericht brought out in an interesting way the constructive work and follow-up of all gas company service that could result from a proper planning of the contact of the home service director with the customer—"woman-to-woman."

Reproductions of the various papers presented will be found in the trade press.

The Tuesday afternoon session was largely devoted to reports of standing committees, and the progress of the research work being conducted under their jurisdiction. A paper on "Corrosion Survey for Pipe Lines and Distribution Systems" was presented by Dr. Scott Ewing, Research Associate of the American Gas Association at the United States Bureau of Standards, which was well received.

Under the supervision of the Subcommittee on Pipe Joints J. A. Perry presented a paper on Corrosion of Bolts on Pipe Joints which brought out clearly the importance of this aspect of the mechanical pipe joint problem. Also under the sponsorship of the Pipe Joints Committee there was presented a paper on the "Distribution of Gasket Pressures in Pipe Joints and Clamps" by George H. Pfefferle, of the S. R. Dresser Manufacturing Co., Bradford, Pa.

Following the presentation by Mr. von Maur of a review of the accomplishments of the conferences since their inception, a human touch was added to the proceedings by the presentation to Mr. von Maur of a handsome fountain-pen desk-set, together with a testimonial signed by his many friends in appreciation of his many contributions to the progress of the industry and the Distribution Conferences.

Closing his remarks, Mr. von Maur read the following characteristic poem:

You will notice, I have not mentioned a single name.
Few there are who, unaided, reach the Hall of Fame.
Help may come from the Shop or the Repairer's bench—
From the office desk or from the trench.
Some may hold the ladder with muscles strained.
Some assist with minds that are college trained.
He who succeeds will be the first to give credit to all
Who helped him reach that famous Hall.

The attendance, as usual, was more than expected, over 300 engineers being present, representative of all parts of the country. It is again a pleasure to record that a very large percentage of natural gas distribution engineers were in attendance. Chester L. May's paper, "Organization and Operation of Numerous Distribution Systems Scattered Over a Wide Area," proved most interesting to both the natural and manufactured gas engineers, and gave a clear understanding of the organization problems in the distribution of natural gas.

Chairman Battin was in receipt of many congratulations on the splendid manner in which he conducted the meetings, and the careful plans he had laid for the program.

Review

Fisher Gas-Analysis Manual. By Maryan P. Matuszak. 40 pp. text; 64 pp. overall, including catalog section for Fisher equipment. Fisher Scientific Co., Pittsburgh, Montreal.

This little manual is intended as a handy outline for workers engaged in analyzing fuel gases principally, although by very easy changes the material could be adapted for handling of flue gases. It is definitely acknowledged that the material covered does not include the analysis of gases containing interfering components such as the higher hydrocarbons or considerable quantities of H_2S, etc.

The purpose of the manual is stated in the introduction as follows: (1) to give directions for assembling various gas-analysis apparatus of the Orsat type, made by Fisher Scientific Company; (2) to furnish complete but brief and concise directions for making gas analyses to operators who have not had previous training in this type of work; (3) to present some new time-saving technique to operators already familiar with gas analysis; and (4) to inform gas analysts of some recent developments in modern gas-analysis equipment.

This useful little manual can be obtained on application to the Fisher Scientific Company. It should be very helpful to chemists using the Fisher equipment, although others might find it convenient as a summary of the principal procedures of gas analysis.

—C. G. S.

Self-Contained, Gasoline-Operated Jack Hammer

By W. M. HENDERSON

Los Angeles Gas and Electric Corporation

THE pneumatic hammer, or gun, is the accepted means for breaking paving where ditch excavations are to be made in hard surface streets, or trenching is to be done through solid rock.

Where the excavation is restricted in size, such as for service connection, repairs, inspection, or bell hole for caulking, a self-contained power hammer is far more convenient.

Such a hammer is a two-cycle, gasoline engine-powered gun, the cylinder head delivering the force of the explosion direct to the cutting tool. The gun, completely equipped for action, weighs less than 100 pounds.

This type hammer is not so effective nor fast as an air gun operated under 100 pounds air pressure, but it is far more convenient and economical, and cannot be matched on small jobs.

After many months' operating experience with the gasoline type hammer, it has been adopted as standard equipment for use by emergency or repair crews working at maintenance work on gas mains and service. It is also part of the equipment carried by the crew engaged on resurfacing street excavations.

With the extensive and increasing amount of hard surface streets, the repair crews, in order to operate efficiently, must have power equipment. When working in congested areas, the compressor, mounted on a truck, is as much a burden as a convenience. Parking the truck is a problem, as is also the difficulty with the airhose lines stretched across streets, sidewalks, and car tracks. Frequently the compressor is used only to break a few holes, and possibly it lies idle most of the day.

The new type meets the standby or emergency demand for a power hammer at a low investment cost. It represents less than one-tenth of the cost of a portable compressor with necessary tools, including the mounting on an automobile truck.

Figure 1
Excavation cleaned

This gas engine hammer will break pavement practically as fast as an air gun, when operated under normal working conditions; does an equally good tamping job, in an upright position, but is awkward for tamping tunnels or when operated in a horizontal position. It drills

Figure 2
Excavation filled

test holes satisfactorily, but there is no exhaust air available to blow through the drill, and the drill is not self-turning. Spading may be done equally as well as with air-operated tools.

In breaking pavement to determine a gas leak, if the gas is found to be blow-

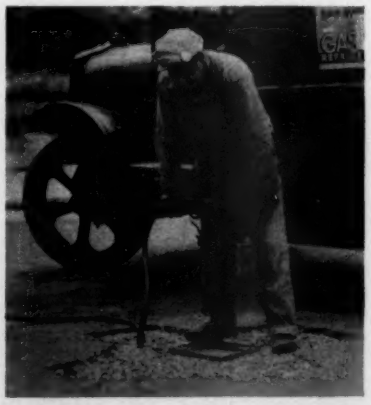

Figure 3
Tamping

ing the use of the gasoline-operated hammer should be discontinued; for it is possible to ignite the gas by the exhaust. An attempt to install an extension on the exhaust, to convey it away from the hammer, seriously affected the efficiency.

This hammer has a two-cycle, air-cooled motor, exploding the "charge" on the head of the piston, which, in turn, drives against the head of the gad, or tool. The valves of the engine are merely apertures in the piston and sidewalls of the cylinder, sealed and unsealed by the sliding of the piston. By removing the two tie-rods on the hammer, the entire inside of the gun may be removed. To dismantle the hammer into its component parts and reassemble requires less than one-half hour's time. Minor repairs are occasionally necessary, but all repair parts that ever may be required, and which are carried by the crews as insurance against breakdown, do not exceed the value of $10. The recoil spring under the piston weakens in service and decreases the gun's efficiency; but its replacement, when necessary—best judged by the operator—is simple.

The original purchase price of the hammer was $411, including all necessary tools and emergency repair parts, or extras, which cost also includes the mounting on the truck, as illustrated in the accompanying photograph. This tool is a substitute for pneumatic equipment; that is, for a compressor mounted on a truck, with tools, which represents an investment in excess of $4,000; and, even though it does not accomplish all the things which can be done with air, it at least is 90 per cent effective, and represents only 10 per cent of the compressor investment.

Operating expenses are very low—the charges for gas and oil were $9.28 for 250 hours of operating. This period was one year's service. This is a relatively short time of operation in a year, but it indicates that an air compressor, if available, would probably lie idle an equal number of hours, representing a heavy investment cost on idle equipment.

A new use for this gasoline-fired gun has been developed in recent months,

Figure 4
Rock tamped flush

Figure 5
Sprayed with bitumen

where it again is rendering satisfaction. It now is used on street excavation resurfacing, in place of the eight-ton roller ordinarily employed for that purpose. It

Figure 6
Covered with thin layer of fine rock screenings; tamped if necessary

is not only a substitute, but it does a better job than the roller. The resurfacing jobs are mostly in oil and rock; some in asphalt or concrete. By use of the roller it is necessary to build up the paving

Figure 7
Hammer mounted on truck

above the surface of the street and then crush it down. With the hammer the base is tamped, if necessary, then the large rock, and finally the small rock; next, the surface. This has resulted in a far superior job. Thus, a tool weighing slightly less than one hundred pounds can do a better job than an eight-ton roller.

The pictures illustrate the six stages of the resurfacing of a patch:

1. Clean excavation to proper depth; tamp base.
2. Fill flush with No. 3 crushed rock.
3. Tamp.
4. Fill with No. 4 rock; tamp until top rock is flush with top of paving.
5. Spray with bitumen.*
6. Cover with gun sand, tamping if necessary.

The use of the gun tamper is restricted to patching. Long ditches are best resurfaced with the aid of the eight-ton roller. But time is the only factor in favor of the roller on large jobs. The savings, when using the tamper, are considerable; overall operating cost, no special transportation (each roller requires an extremely awkward trailer), a saving in labor (for an extra man is required when the roller is used). Our records indicate that two men can do 25 per cent more resurfacing of patches with the new tool in one day than three men with a roller.

The gas engine hammer does not meet with immediate acceptance by the workmen, because they state, "it vibrates more than air equipment, also makes more noise." They also seek for what it will not do, rather than what it will do. The crews were offered the privilege of calling for an air compressor any time the hammer was not found satisfactory for the job; but in over a year such a request has not been made. Now, the general opinion is that the gun has "made good."

* Cold, emulsified asphalt as a binder gives the better job, and is best when used with the Rodax as a tamper because of the difficulty of heating the base of the tamper.

Convected Heat Proves Superior To Radiated Heat in Core Baking

IN industrial heating operations engineers frequently are faced with the necessity of deciding between two or more methods of applying heat. No general rule can be laid down, yet the wrong decision may burden the plant with unnecessary fixed charges and continuing high operating costs as well as other disadvantages.

In core baking, for instance, the choice of heat application usually lies between convected and radiated heat. In this case not only are the cost factors of importance, but the very quality itself of the cores is affected to a surprising degree.

These facts are brought out in several bulletins and pamphlets on "The Application of Heat to Core Baking" which were prepared for the American Gas Association Committee on Industrial Gas Research by the Department of Engineering Research of the University of Michigan. Extensive and careful tests on which these reports are based indicate that considerable strength and uniformity are added to cores, low operating cost is attainable and high quality assured when convected heat, as generated with gas, is used.

The material advantages accruing from the use of convected heat instead of radiated heat when baking cores is strikingly shown in a summary of the time and total heat energy required for core baking during some tests made at the University of Michigan. Actually fewer B.t.u. were required when the heat was of the convected type, and considerably less time was required to bake the cores, as shown below:

CONVECTED HEAT		RADIATED HEAT	
Total time in Oven—Minutes	Total B.t.u. Consumer	Total time in Oven—Minutes	Total B.t.u. Consumer
160	4,490,192	180	4,841,628

Several methods of creating convected heat with gas have been developed and are suitable for meeting core oven requirements of any size. Their use is recommended as a means of offering foundries the best core heating service available.

16th Annual Convention *and* Exhibition

AMERICAN GAS ASSOCIATION

Atlantic City, N. J.

Week of October 29, 1934

Monthly Summary of Gas Company Statistics

For Month of February, 1934

Issued April, 1934, by the Statistical Department of the American Gas Association
420 Lexington Avenue, New York, N. Y.

PAUL RYAN, Chief Statistician

COMPARATIVE DATA ON THE MANUFACTURED AND NATURAL GAS INDUSTRY FOR THE MONTH OF FEBRUARY

	Month of February			Two Months Ending February 28		
	1934	1933	Per cent Change	1934	1933	Per cent Change
Customers						
Domestic (Including House Heating)	14,617,400	14,447,800	+ 1.2			
Industrial and Commercial	758,700	746,800	+ 1.6	*See February*		
Total	15,376,100	15,194,600	+ 1.2			
Revenue (Dollars)						
Domestic (Including House Heating)	51,960,200	51,943,000	0.0	105,432,500	107,213,500	— 1.7
Industrial and Commercial	17,096,700	15,121,600	+13.1	33,558,100	30,353,600	+10.6
Total	69,056,900	67,064,600	+ 3.0	138,990,600	137,567,100	+ 1.0

COMPARATIVE DATA ON THE MANUFACTURED GAS INDUSTRY FOR THE MONTH OF FEBRUARY

Customers						
Domestic	9,334,800	9,299,300	+ 0.5			
House Heating	91,400	60,600	+50.8			
Industrial and Commercial	440,600	434,900	+ 1.3	*See February*		
Miscellaneous	9,600	9,400	—			
Total	9,876,400	9,804,200	+ 0.7			
Gas Sales (MCF)						
Domestic	20,905,000	20,494,700	+ 2.0	42,322,100	42,384,400	— 0.1
House Heating	4,832,600	3,074,200	+57.2	9,394,800	6,168,200	+52.3
Industrial and Commercial	7,480,600	6,109,300	+22.4	14,425,800	12,275,700	+17.5
Miscellaneous	207,200	193,800	—	425,800	403,000	—
Total	33,425,400	29,872,000	+11.9	66,568,500	61,231,300	+ 8.7
Revenue (Dollars)						
Domestic	25,127,800	25,041,400	+ 0.3	50,854,800	51,518,200	— 1.3
House Heating	3,018,900	2,175,200	+38.8	5,913,800	4,353,400	+35.8
Industrial and Commercial	5,949,600	5,601,300	+ 6.2	11,706,800	11,278,600	+ 3.8
Miscellaneous	145,500	139,200	—	293,700	284,500	—
Total	34,241,800	32,957,100	+ 3.9	68,769,100	67,434,700	+ 2.0

COMPARATIVE DATA ON THE NATURAL GAS INDUSTRY FOR THE MONTH OF FEBRUARY

Customers						
Domestic (Including House Heating)	5,191,200	5,087,900	+ 2.0			
Commercial	283,100	279,000	+ 1.5			
Industrial	23,500	21,800	+ 7.8	*See February*		
Miscellaneous	1,900	1,700	—			
Total	5,499,700	5,390,400	+ 2.0			
Gas Sales (MCF)						
Domestic (Including House Heating)	38,402,300	39,014,000	— 1.6	77,639,900	81,790,500	— 5.1
Commercial	7,300,200	7,535,600	— 3.1	14,748,400	15,055,800	— 2.0
Industrial	47,535,300	37,465,700	+26.9	93,167,300	73,850,200	+26.2
Miscellaneous	1,111,400	716,600	—	2,015,400	1,490,400	—
Total	94,349,200	84,731,900	+11.4	187,571,000	172,186,900	+ 8.9
Revenue (Dollars)						
Domestic (Including House Heating)	23,813,500	24,726,400	— 3.7	48,663,900	51,341,900	— 5.2
Commercial	3,161,900	3,158,900	+ 0.1	6,322,800	6,410,900	— 1.4
Industrial	7,649,800	6,086,600	+25.7	14,877,000	12,099,000	+23.0
Miscellaneous	189,900	135,600	—	357,800	280,600	—
Total	34,815,100	34,107,500	+ 2.1	70,221,500	70,132,400	+ 0.1

Gas Revenues Increase 3% in February

REVENUES of the manufactured and natural gas industry aggregated $69,056,900 in February, 1934, as compared with $67,064,600 in February, 1933, an increase of 3 per cent.

The Manufactured Gas Industry reported revenues of $34,241,800 for the month, an increase of nearly 4 per cent over the corresponding month a year ago, while revenues of the natural gas industry totalled $34,815,100 or 2.1 per cent more than for February, 1933.

Sales of manufactured gas reported for February amounted to 33,425,400,000 cubic feet, an increase of 11.9 per cent. Natural gas sales for the month were 94,349,200,000 cubic feet, an increase of 11.4 per cent.

As of February 28, 1934, total customers of the industry aggregated 15,376,100, an increase of 181,500 during the twelve-month interval.

Sales of manufactured gas for domestic uses, such as cooking, water heating and refrigeration, etc., were 2 per cent above the figures reported for February, 1933. Sales to industrial-commercial users also registered a distinct upturn, manufactured gas companies reporting an increase of more than 22 per cent in this class of business, while for the natural gas companies the gain was nearly 27 per cent.

Even larger gains were reported by the manufactured gas companies in sales of gas for house heating purposes, which increased more than 57 per cent from the February, 1933, figure.

GAS PREPARED TO SERVE 15,000,000

(Continued from page 152)

ing. Refrigeration has been perfected technically and is now in its full stride commercially. Summer air conditioning has gone through the research, development and test periods and is now being prepared for merchandising. The commercialization of refrigeration has centered largely around the Commercial Section of the American Gas Association. The technical development of air conditioning homes with gas in the summer originated with and was carried through by the Committee on Industrial Gas Research. I quote these two instances as examples of how the industry is represented in a most practical way by its national association.

Both of these activities have been carried on with firm determination during the depression with hearty support from our Executive Board. They will have a cumulative effect as business progresses. But the Association's efforts have not been confined to the new uses. The Board, the various committees and the Testing Laboratory have been diligently carrying on work that has fortified the position of the older uses of gas through a period of fierce competition with general economic conditions and with other fuels.

The potential uses for gas exceed those of any other form of energy in the home. With the industry thoroughly organized, with old uses for gas modernized, with new uses being made available, and with rates adjusted to attractive levels, I say that gas is prepared to serve in aiding the business upturn and I predict that we will be successful in contributing our part and that we will benefit through larger sales and a larger income.

CUTS COST IN HALF

(Continued from page 163)

drying by electricity tended to make the brush bristles become brittle and break off in service.

The change to gas heating, with a direct-fired air heater burning 200 cubic feet of 530 B.t.u. gas per hour, improved the temperature curve of the oven. This equipment has now been in operation for about six months and is giving complete satisfaction. In addition to an improvement in the product and a lower operating cost, there is a saving of about four hours in the time required to bring the oven and its contents to the desired operating temperature.

The costs are based on electricity at 3 cents per kilowatt hour and gas at 90 cents per thousand cubic feet.

F. W. Wright, industrial fuel representative of the Public Service Electric & Gas Company of New Jersey, writes that the Hones nozzle burner firing into the air heater, protected by a Partlow safety valve and pilot and temperature control, has been the principal reason for the improvements and the reduction in cost.

To Speak at Cornell

ON May 18, E. O. Mattocks, research engineer of the American Gas Association Testing Laboratory, will give a talk before the Cornell Section of the American Society of Mechanical Engineers at Cornell University. His subject will be "Temperature and Its Measurement." Mr. Mattocks is actively engaged in research in high temperature gas combustion for the Committee on Industrial Gas Research.

Laclede Gas Company's Emergency Crew

Standing—Left to right: Andy Day, Edwin Dowley, Raymond Evans, Chas. H. Wiley, Superintendent South District, H. M. Gerken, E. H. Goetsch, Superintendent North District, A. J. Windey, E. L. Ernst and George Herbert
Seated—Left to right: John Lee, J. D. Sowash, John Davis, W. M. Stanton, John J. Barada, Director of Safety, Thomas Morley, Herman Berendes and E. Belaey

SHOWN above are members of the Emergency and Resuscitation Crew of The Laclede Gas Company, St. Louis, Mo. These men direct the activities of the company at fires and in cases where artificial respiration is required. This crew has assisted the St. Louis Police and Fire Departments in organizing groups for similar work.

Personnel Service

SERVICES OFFERED

Executive-engineer (41) N. Y. State Engineer license, member A. S. M. E. Available for investigations, reports, rate studies, valuations, promotional work, organization of construction and operating forces or general executive assignment. Many years' successful utility experience with both independent and syndicate properties. **834.**

Engineer, broad experience, industrial design, consulting, supervising, executive, plant construction, development product, air and gas compressors, gas engines, design, development, application, sales, automatic gas-fired forced air equipment, services open by the case or definite connection considered. **835.**

Sales engineer capable of managing house heating department in all its branches, covering surveys, installation, estimates, sales promotion, service, repairs and maintenance. Experience also covers industrial field with regard to high and low pressure boilers and large volume water heating. Broad general and technical experience. **836.**

Graduate **gas engineer** (29) with five years' experience in engineering, development and operation of carburetted water gas and coal gas plants, gas transmission and high and low pressure distribution systems; market studies, rates and valuations. Trained for and experienced in utility management. **837.**

Accounting, cost-general, eight years' experience as cost accountant compiling cost data covering utility operations and construction, such as: gas plants, booster stations, manufactured and natural gas transmission and distribution systems. Have audited field office records (payrolls, petty cash funds and material accounts) and compiled special accounting—statistical reports. **838.**

Gas engineer, B. S. in Chem. Eng.; five years rounded experience in U. S. and abroad. Practical and technical experience in plant, distribution, office, construction and survey. Desire executive position with small company. Will go anywhere. Married (29). **839.**

Measurement and distribution engineer, speaks Spanish, nine years' design, installation and operation high and low-pressure transportation and distribution natural gas. Now employed in modern coal and water gas production. Specialist in reorganization of meter department and reduction of unaccounted for gas. Prefer Southern-western states or foreign country. Married. **841.**

Young, energetic, technical graduate (B. S. and M. S. in Mech. Engr.) with four years of varied experience with **natural gas** properties: married (29). **843.**

General **manager-engineer** (37) thoroughly experienced in natural gas business from organization, financing, design and construction to production, transmission, distribution, load building and accounting; wholesale and retail. Just completed special services in connection liquidation and reorganization of two properties. **844.**

Experienced **sales manager** with gas appliance manufacturers dealing with utilities or large department stores and furniture trade. Qualified to manage sales department or cover good territory in which there is an opportunity to produce. **846.**

Engineering executive with twenty years of unusually broad technical and practical experience in the management, operation, financial and public relations problems of gas companies, and with especial training in rate development, desires either a permanent connection or a temporary opportunity to handle special problems; qualified consultant and expert witness. **854.**

Gas **engineer** and **manager,** university graduate (45), twenty-two years' experience in executive positions, including coal, oven and water gas, natural gas, high and low-pressure distribution. **857.**

SERVICES OFFERED

Manager-gas engineer (46) married. Technical education, twenty years' experience in construction, engineering, manufacture, distribution, finance, management, sales and public relations; wide experience. Build up property or develop sales per year per customer, small or large property. **858.**

Gas engineer (34) technical graduate, with several years' broad experience with affiliated holding and operating companies in high and low pressure distribution, coal and water gas manufacture, natural and refinery gas, design and installation of distribution and transmission systems; specialist with excellent record of results in mitigation of unaccounted for gas. **859.**

Reduced income of gas companies require better and more intelligent plant control to help maintain dividends. Experienced **gas engineer** can bring to your organization or company that technical and practicable aid necessary to further reduce operating expenses to a minimum. **860.**

Utilization sales engineer (39) with unusually broad experience in employ of gas companies and equipment manufacturers service. Technical graduate and thoroughly well qualified for domestic commercial and industrial sales or research. **861.**

Manufacturers representative with many years' experience and with headquarters and staff in New York City, covering Eastern territory, will be glad to represent another non-competing manufacturer, preferably industrial specialties. **862.**

Sales Executive or salesman desires responsible position. Twelve years with specialty manufacturers in sales promotion work successfully selling on national scale to leading gas companies. Familiar with plumbing and heating appliance trade. Handle advertising. College man in prime, clean record, energetic, eager, resourceful, accustomed to large volume business. Compensation open. **863.**

An honest, steady, well-educated, thoroughly trained gas man desires a connection where his fifteen years of varied experience can be used. He has served in plant and distribution operation, as **district manager,** headed gas department of combination company; understands safety work and has devoted considerable study to rate making. **864.**

Manager—Formerly executive in operating charge for corporation having numerous gas properties. Has held management positions both large and small cities. Experience as executive foreign operations and engineering for holding companies. Thorough knowledge of gas business including operation, rates, merchandising and public relations. Excellent education and record. Age fifty. **865.**

Advertising, Publicity, New Business or Personnel. University Graduate, one year with a New York newspaper, some merchandising experience with a large department store and two and a half years with a gas company doing **sales** promotional work and editing the company paper. **866.**

Combination Gas and Electric **Utility** man. Expert on meters, experienced Superintendent of distribution, practical engineer. Age 36, speaks English and Spanish. Excellent references. Will go anywhere. Invites most rigid investigation. **867.**

Sales position desired by man having a number of years' experience in both Industrial and Domestic gas appliance sales and installation work with utility companies. Also familiar with natural gas conditions and requirements. **868.**

SERVICES OFFERED

Manufacturers agent, graduate engineer, many years' sales experience and unusually wide acquaintance with executives of gas companies, wholesale plumbers and jobbers. Covers eastern territory headquarters in New York City. Excellent sales record and wants an additional non-competing line of interest to present clientele. **869.**

Technical **Engineer,** with several years' experience in each of following—Operation, Management, Valuations, Gas Engineering, and Sales Engineering. Best of references. **870.**

Manager. Due to a consolidation of Gas and Electric properties, a Manager is seeking a change. One with wide practical experience and who has been successful. Can furnish any desired references including present employers. **871.**

Engineering graduate with several years' varied experience in the design, manufacture, erection and operation of gas plant equipment, and in supervision of plant operation, desires **supervisory** or technical position with small gas company in any locality. Married. **872.**

Fourteen years' experience in testing, design and manufacture of gas appliances and controls. Thoroughly familiar with service conditions on all types of gas by personal experience in national laboratory and in the field. Desire permanent or consulting connection with manufacturer, or with gas company in **utilization** and **sales.** **873.**

Gas engineer who has had 3½ years' experience in general operating department of public utility. Past 18 months assistant to superintendent of manufacture, in the production of coal and water gas. Graduate E. E. Age 26. Single. **874.**

POSITIONS OPEN

For large retail store handling ranges, electric refrigerators, gas appliances and hotel kitchen equipment and serving large southern city, a man who knows how to approach the public on both domestic and commercial equipment. Familiar with and knows how to measure homes and stores for central heating, to secure business and has ability to create new **sales** ideas as well as employ competent sales force. Position will pay a reasonable drawing account based against commissions. **0268.**

Manufacturer of well-known burner successfully used for domestic house heating and industrial purposes is desirous of obtaining **manufacturer's agents** in the greater portion of the country except the New England states. Prefer man with gas utilization in all fields including house heating. **0269.**

Gas Appliance **Salesman** wanted. Progressive, established manufacturer of radiant and circulating heaters wants experienced representatives for Texas. One having both dealer and utility experience preferred. Commission basis, with possibility of drawing account. State age, experience, full qualifications. Unusual opportunity. **0270.**

Manufacturer's Agent representing important Industrial Gas Appliance Manufacturer has a proposition concerning available territory in Western part of New York State. Straight commission basis. **0271.**

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